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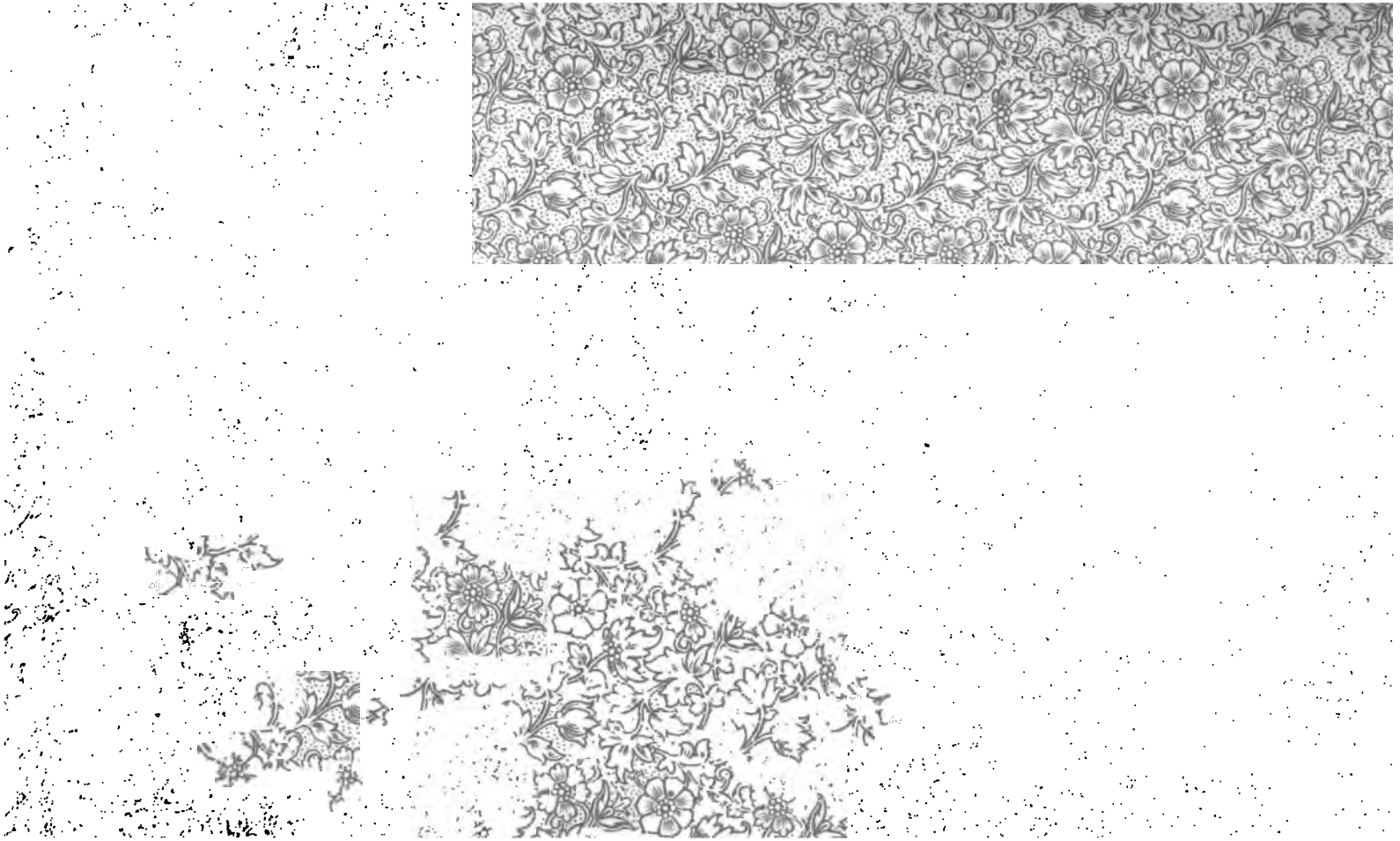

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VOLUME II. NO. 1.

TRANSACTIONS OF

THE ILLINOIS SOCIETY FOR CHILD-STUDY

REPORTS OF WORK IN CHILD-STUDY CARRIED ON BY MEMBERS AND ROUND TABLES.

EDITED BY
C. C. VAN LIEW
Secretary of the Society

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The PRESIDENT and the SECRETARY-TREASURER.

INTRODUCTION.

This first number of the second volume of the Transactions of the Illinois Society for Child-Study is contributed almost wholly by those who have been working members of the Society for the past year or two. In preparing for the Annual Child-Study Congress to be held at the Chicago and Cook County Normal School, Englewood, May 14, 15 and 16, 1896, the officers of the Society thought best to call out as general an expression as possible from the members of the Society of the value that the work of the Society has been to them and of the actual work of Child-Study that they have undertaken. Accordingly, in Special Circular No. 1, announcing the preparation for the Child-Study Congress, the following questions were put to the members of the Society with the request that all who could do so should prepare and send in responses for publication:

1. How has what you have heard or read on the subject of Child-Study helped you in your daily practical work of education,—in your *treatment* of children, either physically, mentally or morally?

2. Have you pursued any *special* study of children? If so, no matter how slight, please write out the results, or send in the full data if you have them recorded.

3. Have you, since your acquaintance with the subject of Child-Study, discovered among the children under your care any whose senses, motor activities, or general mental powers were in any way *defective?* Did these defects seem in any case to be due to causes which it was possible for you to remove? What did Child-Study lead you to do for them? How was the defect discovered, and what change appeared in the child after it was removed?

4. Have you made use of any of the syllabi for Child-Study, prepared for the use of the Society and published in its Trans-

actions, Vol. 1, Nos. 1 and 2? If so, which ones have you found most useful for the work of your grade or school? Give a summary of the results, or, if available, send in the individual data in simple form.

In spite of the reluctance which many feel in writing upon a subject which is new to them, the Society has succeeded in getting a number of responses, most of which appear in the following pages. While many of these published reports cannot lay claim to great scientific accuracy, they are still of very great value to the Society in many ways. Those that have not yet taken part in the work of Child-Study, especially those who have doubted its practical benefits, will receive a new stimulus from the testimony of their fellow workers in all fields and grades. The Society, as an organization, will be better able to know wherein its work in the past has been either efficient or fruitless. It hopes thus to be still better able in the future to guide the work of child-study in this state with efficiency.

The material contained within these pages does not by any means represent all of the work that has been carried on by the members of the Society. The Child-Study Monthly, edited by Dr. W. O. Krohn, of Champaign, Illinois, which always co-operated heartily in the work of the Illinois Society for Child-Study, has, during the past year, published a number of articles by members of the Society which should be counted as in part due to inspiration received from the work of the Society.

A number of others state that they have sent the data which they have collected to G. Stanley Hall, in reply to certain of his syllabi published in the transactions of the Society.

A great many whose names do not appear in these pages, have frequently testified to the benefits they have received from the publications of the Society.

A number of reports that have been sent in were received too late to be published in this number of the transactions. They will probably be reserved for a future number.

The members of the Society may look in the future for a number of the transactions containing some of the papers and discussions of the Third Annual Child-Study Congress.

It has been pre-eminently the province of the Illinois Society for Child-Study to lift the subject of Child-Study into prominence before the teachers, parents, and social workers of the state. In this work it can lay claim to a fair degree of success. Its membership has been constantly increasing so that in a short time the 1,000 mark will have been passed. It will probably be along this same line of propaganda that the greatest usefulness of the Society will be found for some time to come, so that the measures undertaken by the officers and executive committee of the Society will undoubtedly be shaped by the attitude which seems to prevail among its members toward the entire subject of Child-Study.

As some index of the abiding interest and real progress that Child-Study is achieving in modern educational and social circles, and especially among those who are busy with the constructive problems of education, this number of the transactions of the Illinois Society for Child-Study seeks its mission.

C. C. VAN LIEW,
Sec. and Treas.

NORMAL, ILL., *April, 13, 1896.*

A CASE OF ARRESTED MOTOR DEVELOPMENT.

1. *Child Observation.*

From birth to the present time (14 months) I have made a constant study of my baby boy, and have made daily records of his physical and psychological development—a study inspired by reading Froebel's "Education of Man," guided by Preyer's "Development of the Child," and accomplished by the experience in observing gained by ten years' teaching.

2. *Defective Children.*

A boy of eleven years suffering from arrested development was placed in my care for one hour's study daily. His history gleaned from different sources was as follows:

Physical.

(1) His stature and proportions were normal.
(2) He had not been able to walk until five years of age.
(3) Until very recently he had been fed, and even at present eats in a very clumsy manner.
(4) He was still unable to dress himself entirely alone, but had succeeded in doing all but the buttoning of his clothes.

Mental.

(1) He had in general about the mental development of a five-year-old child.
(2) He was untruthful, sly and crafty.
(3) Things belonging to others were taken by him and either destroyed or hidden.

Previous Education.

To bring him to his present state of development much time, skill, labor and money had been expended. He had had medical, electric and massage treatment. A governess had been employed for him, and his sister (a bright child) had succeeded in teaching him to read—how, she could not tell—but had failed to teach him to write, draw, count or spell, and he thoroughly disliked the effort. Upon examination I noted these additional points:

Physical.

(1) He could not walk erect, but fell from one foot to the other in a stumbling manner and could run more easily than he could walk:

(2) He could not put his hand, finger, or foot upon any particular place, in response to a command, although he made strenuous efforts which in their wavering uncertainty resembled the motions of a five months old child in its first efforts to reach and grasp.

Mental.

(1) Had no difficulty in understanding everything said to him, but always interrupted a story with innumerable "Whys."

After numerous experiments the following conclusions were reached:

(1) That he was able to understand what was required of him, and to will to do it, but was not able to co-ordinate the muscles to accomplish the act.

(2) That what he once did could be done much more easily the second time, and what was learned one day was distinctly remembered the next, and could be given with comparative ease.

(3) That his inability to write and draw resulted not from a failure to understand or to form the mental image, but from lack of ability to co-ordinate the muscles.

(4) That the only road to his mental development was through physical culture.

(5) That his love for music would make him susceptible to rhyme and rhythm. Upon these conclusions was based the following treatment:

Exercises for the fingers, hands, arms, feet and body were chosen with special reference to co-ordination of the muscles. These exercises he was required to do from dictation. The first time a motion was made it was necessary to guide the hand or foot. The exercises, at first very simple and slow, were gradually increased in rapidity and complexity and were dropped for new ones as soon as they required no thinking.

This co-ordination exercise was followed each day by practice in writing or drawing, after which more exercises we

given, followed by counting with bright-colored objects and by reading.

His first numerical figures sprawled over half the page, were upside down and wrong side around. He was required to make figures only after he had grasped the idea of the numbers represented.

His drawings consisted in tracing, first straight lines, then simple figures, which exercise was replaced as soon as possible by drawing from dictation. The reading was chosen from a profusely illustrated First Reader. Repeated writing of all new words impressed their orthography upon his mind. Anything to be memorized was made rhythmical and set to music.

The Saturday hour was devoted to a walk in the woods, with talks on Nature, and especial attention to walking, stepping over objects, running, climbing, jumping, etc.

At the end of three months he was able to do all of the coordination exercises, from dictation, involving rapid changes, and certain rhythmical exercises with the guitar accompaniment.

There was some improvement in his manner of walking, and he was able to climb, to jump over stumps, step across a stream and to do many things which he had been afraid to try before and of which he was now very proud.

He could write his name — a very difficult one — could write, spelling correctly, the words from his reading exercises, count intelligently to ten and solve problems involving these numbers; draw from dictation figures composed of horizontal, vertical and slant lines; could fix his attention upon the subject in hand; had learned to obey implicitly and to love his work. He was now able to do class work and was put into a school with other defective children.

MRS. JEANNETTE WINTER HALL.

CHICAGO, ILL.

OBSERVATIONS CONCERNING NORA S.

She is seven years old, three feet nine inches high, and of average weight and size. Came to me January 27, 1896, but for two weeks was sick with severe gastric difficulties, from which she did not recover for four weeks. Since that time she has been with me nearly four weeks.

I speak of her first as she was when she came to me. She was unable to walk any distance without holding my hand; could not go up the steps alone. Her position was much forward, walking on her toes. Her head was not erect. The saliva flowed from her mouth. Her speech was difficult to understand because of baby talk and inarticulation. A vacant look seemed to betray a want of ideas; when spoken to it was difficult for her to turn her head toward you, and often her eyes did not rest on you for some minutes. She could not move both first fingers at once. Unless her eyes followed her hand, the hand did not go to the desired place, but shot past it or fell short of it. She could not walk and clap her hands at the same time, nor run and make her arms go like a bird flying.

She could not skip (many normal children cannot). To adjust her movements to definite regular time was beyond her power. So far as I was able to judge her ability, she could be classed in some respects with the two- or three-year-old. (However, she still has many baby ways befitting a child of one year.) Her senses, so far as I can find out, are normal. There is nothing lacking mentally that I know of, that is not due to motor inability. Her difficulty seems to be with the mechanism used in expressing her ideas. I think mental acts left unexpressed grow less and less frequent and powerful.

N. is a very affectionate child and full of curiosity. Her memory is excellent; judgment faulty; imagination normal; perception slow and incorrect; comparisons bad; imitation inaccurate because of lack of correct motor activity; creative ability fair.

She exhibits much intelligence in her plays; that is, in being able to apply means to an end and in profiting by experience. But she has failed so many times to perform the desired task that the family have performed it for her, thus robbing her of valuable experiences.

I began my work by having her walk to definite time, either by counting or clapping or by use of the triangle. When she walked slowly she could walk in time, but a quicker step entangled her and she stubbed along as before.

I had her walk looking up at me or thinking of birds high in the top of a tree, always holding her hands in mine; now she can walk alone without wabbling about as much as formerly. The rigidity of her muscles has been overcome in a measure by having her lift her arms and let them fall, skipping lightly and easily, jumping up and down on her toes noiselessly.

To help her hands express the mind's acts, I have used many motion songs, and especially "finger plays." "Thumbkins says we'll dance," for example. She has improved in this now and can use both thumbs or like fingers at one time. She can use the scissors with good results. At first she could not cut anything. She is still unable to co-ordinate movements of feet and arms definitely. I do not know any new way to try; I just keep her doing and doing, and it may come after awhile.

I speak difficult words to her plainly and slowly, reproducing a sound at a time. Then she gives the sounds separately, then whole words. It is very difficult for her to make sounds represented by l, w, r, k, st, str, and sw. She speaks more plainly, but the baby talk has not disappeared.

I have used the large material of the first and second Kindergarten gifts to represent her thoughts. These she can use with less danger of discouragement and of over-exertion than the smaller material. Her lack of correct comparison and judgment is helped if she can be concentrated fully upon the matter in hand, and I question her in many ways upon the objects compared.

One little boy of my Kindergarten is especially fond of her. He has many very awkward bodily movements. I wonder

what is the bond of sympathy between them? She creates no amusement among the other Kindergarten children now, and they expect her to take part as they do. Considering the time she has been here she seems to be doing fairly well. In singing she cannot articulate, but keeps on the musical key throughout. Her ideas are more abundant and livelier. She holds the thought upon which our work is based fairly well.

From the beginning she has seemed to lack strong initial energy in whatever she undertook, always needing to be spurred on to the finishing of her tasks.

When Nora came to me she had not the least persistence. When asked to show me with the blocks a house, a chimney, or what not, so folded her hands and said, "Me tired." She can now perceive an object and represent it fairly, but not accurately. This through my questions only. She frequently stops and says, "See that," seemingly craving approval. I left her alone one day to fit the second gift into its own box. She did it well, but once I had to encourage her by my suggestions and presence. However, she was noisy about it in a way that would attract the attention of those in the next room. This occupied her some seven to ten minutes. She walks to and from the church while I watch how nicely she can do it.

About five minutes is the most I have kept her walking without me. Eating occupies her a long time without any desire to change. So far in her training I can hold her with pleasure to motion songs longer than to any other material given her.

I asked her to build a wall like one she had seen near her home. She did it well, leaving an aperture as is in the real wall. This, I think, must have taken her ten minutes.

Her mother tells me she scarcely gives her any peace at home, wanting to jump up and down or skip. This indicates, I think, that her muscles are responding to the treatment.

MARY E. DUNLEVY.

BLOOMINGTON, ILL.

FROM A MEMBER OF THE NORMAL PARK ROUND TABLE.

Circulars received and contents noted. I will endeavor to answer questions and do it by number.

1. The study has helped me very much. I wish I could state definitely as to how, but cannot—but it has helped me very much in treating my children physically, especially along the line of food.

2. No, for want of time.

3. Yes, indeed, a most interesting event in connection with my eldest boy, who was nearly 7 years old at the time.

A year ago in December he was very ill with scarlet fever complicated with diphtheria. He recovered nicely with no bad after-effects apparently. This last fall, in taking up our study, Mrs. Jackman spoke of the magazine "Child-Study," and referred to an article on Deafness, in which she was much interested. Of course I was interested, read the article, and at once thought of my boy, because of the habit he had *always* had of leaving his mouth open. I had tried very hard to correct the fault. My husband read the article and the result was that he took the boy to a doctor—the growth was there and it was removed. Perhaps you may have some idea of how elated we were. He has improved so much every way ever since that I cannot be thankful enough to the Round Table work. If it did nothing but that it was worth all the trouble. Our little girl, five years old, has a slight growth and we expect to have that removed.

4. I have read the syllabi with much interest but have made no special use of them.

I consider the Child-Study work a most wonderful help and only regret that I did not have such help in my teaching days.

MRS. G. M. BASSETT.

CHICAGO, ILL.

FROM THE PRESIDENT OF THE LONGWOOD ROUND TABLE.

Wishing to comply with the request contained in Special Circular No. 1, and in the letter to our Round Table just received, and to state some of the practical benefits resulting from what I have heard and read on the subject of "Child-Study," I would say: That my observations have been made during a comparatively short acquaintance with so important and varied a topic, and the results may be limited, though so apparent as to give cause for hope far much greater in the future.

To be personal, I have seven children, whose ages range from seven to twenty-four years, and I think the greatest *pleasure* obtained from Child-Study has been the fact that so many of the phases of child-life and development spoken of in the publications of the Society, and other articles read, as well as in talks listened to, have been substantiated in my past experience with them, as well as in those now taking place. It is worth much to intelligent, conscientious parents, who desire the best good, physical, mental and moral, of those under their care, to feel that they have been and are trying to work along lines recognized by the best authorities in these matters. The "Handbook" and several volumes of the "Transactions" of the Illinois Society and the invaluable "Child-Study Monthly" have contained many stimulating and helpful thoughts for parents as well as teachers. The article of Dr. Krohn on "The Critical Period of School Life" has been worth more to me than all the fees paid to the society, for information gained and remedial measures to be applied, not only to my own children (three of whom are at about this period of life), but to others with whom I have been thrown in contact.

As to a special study of children I enclose (on a separate sheet) a few observations made after reading the syllabus on "The Social Sense." They were taken during our last sum-

mer's excursion spent in the country in Canada, and relate to my youngest boy. I shall be glad if they prove of the least service, as being my first effort in this direction, I am unable to determine their value myself.

I shall, with the help of the secretary, prepare as full a report of our work as a Round Table as possible for the meeting in May. I have also appointed delegates as requested for said meeting. We are all hoping for one that shall prove of great benefit both to parents and teachers.

CHILDREN'S CHUMMING.

(Comp. P. 19—Handbook, Vol. 1, No. 2.)

Benjamin, aged 7. Notes taken for the most part during the months of July and August, 1895, when Benjamin left his friend Howard (H. is a few months younger) at home, his (B.'s) vacation being spent in the country, in Canada.

A few days after his arrival B. said: "I wish, if we come here again, Howard could come too." (A few days later): "I hope I can go home in time to play some with Howard before school begins." (More than a week after this): "Howard is coming here some time; you said he could." (A day or two later): "Mamma, darling, I wish we were home." "Why?" "So I could play with H." (Half an hour later): "Are you tired of being here, Bennie? You know we wouldn't have this nice brook or any water to play in at home." "No, but I want to play with Howard a little; if we come again Howard is coming, too, if his mamma will let him." (Five or six weeks later): "I want to go home and see Howard and Jack" (the family dog). (On the train returning home): "Mrs. —— (Howard's mother) couldn't go away because the children were sick. I think it was because Howard *wanted me.*" After getting home on the first day after arrival he asked if Howard might stay to dinner, and early next morning wanted to go after him to eat breakfast with him, because, as B. said, "We have some work to do together." (A few days later, on returning from school—a different one from that which Howard attends): "I'm in a hurry to play with Howard, for you know I don't see him now very much." After a day or two B. got up at 6

o'clock, dressed and went to Howard's, no one else being up. A few days later he said that he dreamed that a mad dog ran after and bit Howard. A week or two later, hurried in dressing, etc., to go to Howard's before school to give him a box of paints; he had asked if he might give them. One Thursday he asked if he might eat dinner at Howard's on Saturday. I have not made any more notes, but the friendship still exists, though B. has become interested in, and played considerably with other boys. I met B. and H. last Sabbath walking home from Sunday-school with arms thrown over each other's shoulders. Benjamin told me a few days since that he hoped we could go away this summer, as Howard is to be away and he will not have him to play with. B. is of an active, demonstrative temperament—H. quiet and slow; I have not seen much of him at his own home, but his mother tells me he is difficult to manage. He seems, however, always to yield to B., which I have thought might be at the root of B.'s friendship for him. B. seems naturally to lead his playmates, and having only *older* brothers does not have a natural outlet for his love of leadership with them. I asked B. this morning why he loved H., and he said, "Oh, he is my *best* friend, and I have known him two or three years." (Fact.)

I shall enclose some photographs of "my little neighbor," aged about two years, showing various emotions, as requested by G. Stanley Hall, on p. 44, Vol. 1, No. 3, of "Transactions." Hope they may be of help along this line. The "little neighbor" is the first and only child of her parents, and a remarkably normal, healthy baby. The photographs were taken by her mother at home.

THE CHILD AND ANIMAL LIFE.

I do not know under what syllabus to classify the following notes taken at the same time as the preceding on the same boy, and though they may be of no service will venture to send them. Said boy lives in a suburb where horses and dogs were familiar figures in his home life, but cows, pigs, ducks, etc., were comparatively a new element.

Benjamin, aged 7. Showing a child's understanding of, and feeling of kinship for, *animals*.

B. often spoke to cows and other animals, saying, "Hello!" or something of the sort—nearly always going with Mr. F. to see them fed. He asked me to go with him one day to see the pigs. On arriving at the sty he told me that the *sandy* pig would make the *best pork*,—also because he had *loppy* ears (giving Mr. F. as his authority).

One evening he came on the porch, having a decidedly disagreeable odor clinging to his person. I asked what had happened. B. said he had been getting in the pig pen. I asked why he had done so, and he replied, "I wanted to see if they would eat apples out of my hand, and they did, one of them; the other *barked* at me" (imitating the grunting of the pig). (I know of a little boy who, seeing a pig caught in a fence, ran and told his father the circumstances, adding, "and he *mewed*," drawling the word, in imitation of the squealing of a pig.)

As we were one day resting under the trees near a brook where some ducks were swimming, and walking about on the grass, I heard B. talking. I thought at first he was talking to his brother or sister, who were near him, as he said, "Hello, sister! How d'ye do, brother!" Asking him to whom he was talking he said, "Those ducks are my brother and sister; the white one is my sister, the dark one my brother. Come here, sister! Come here, brother! When I say that, they say—" (shaking his head negatively from side to side—meaning no). Any one who notices ducks or geese will remember this motion of the head. The next day some live ducks were brought to the house to be killed for dinner. The children begged to have something else and save the ducks. B., thinking they came from the stream where they had seen the ducks the day before, said, "I don't like to take them away from my brother and sister; they were their visitors and I don't like to take them away from them!" The next day he jumped out of bed very quickly after I asked him, "How are the ducks this morning?" and said, "I must feed those ducks! Those ducks must not starve. The darling duckies!"

The following remarks were made at various times in the past fall and early winter by B., mostly with regard to Jack, the family dog, to whom he seems much attached. They lie down on the floor often in the evening, paws and arms about

each other's necks, and go to sleep. As he came home from school—

"Jack, where's mama?"

Again, "Jack and I are both seven and both have the whooping cough."

Again, "Hello, bright eyes! You bright-eyed dog!"

Again, "He's crying? No, he's got a cough; every one in *our family* has a cough." "Oh, dear! oh, dear, my Jacky dear!"

Jack shows very plainly that he likes to be petted, puts his paws on your lap and asks for it with his eyes. B. said at such a time, "Oh, Jack, you are too pettish!" B. was playing with some old clock works, holding the hammer while the wheels made a peculiar noise, and he said, "This is my dog's tail, and he's howling!" One day he asked me to write to Mr. F. and ask him how Billy (the horse) was getting on.

B., one morning, half dressed, leaned his weight on the bed on his arms, kicking his legs in the air, while making a peculiar "chicken-like" noise, and said, "This is the way a chicken does," and, repeating it in a very lively manner, "And the way a rooster goes!" B. came romping up the stairs one day in a very noisy way, and said in reply to my query as to his motive in making such a demonstration that he was a pony.

MRS. MARY G. YOUNG,
President Longwood Round Table.

CHICAGO, ILL.

FROM THE SECRETARY OF THE NORMAL PARK ROUND TABLE.

In answer to the questions published in your circular I would say:

1. "Preyer's Infant Mind" has helped me in the training of my young son, especially the subject of "Children's Environment" and "Children's Plays'" In the first place try to make the environment that which will give the best mental pictures or concepts; that is, secure the object itself if it can be obtained. In the second instance try to make the plays and playthings helpful to the child in his constructive powers or in his imagination.

2. I have studied the subject of the "Fears of Childhood" to some extent. In this special case the child is afraid only of "Red Riding Hood's Wolf" and the "Three Bears" of the story, caused, I think, by the narration of the tales about bed-time with the consequent dreams.

I submit the following report of work done in the Normal Park Child-Study Round Table:

About fifty mothers belong to the Round Table. The outline taken from the Illinois Hand-book was distributed at the first meeting for the mothers to study throughout the year and report on at the last meeting. A study of "Preyer's Infant Mind" was also taken up—two chapters being assigned for each meeting and a general resumé of said chapters read by one of the members. Much beneficial discussion was thus elicited.

Prof. Donaldson's lecture on "Growth in Relation to Training" was read at one of the meetings.

The following lectures were given in the afternoons on which the meetings were held:

"Children's Plays" .....
Miss Annie Bryan (Armour Institute Kindergarten).
"The Eye" ....Dr. Fowler.
"The Emotions" .....Mrs. F. W. Parker.

In the evenings (so that both parents might have a chance to attend) the following lectures were delivered:

"The Physical Side of Child-Study"..Dr. W. S. Christopher.

"Food, its Moral and Intellectual Value" .....
.....Dr. J. H. Kellogg.

"Results so Far Accomplished in Child-Study".....
....Dr. W. O. Krohn.

"Detection of Disease in Children Through Exact Measurements".....Dr. Bayard Holmes.

(I would say in this connection that the lecturer explained that the cause of stupidity in some children was deafness which might be remedied by a slight operation—the removal of a growth from the ear. A parent who was present on hearing this immediately took her little son to a competent surgeon, and found that this growth was causing his deafness, and hence stupidity; having it removed aided the child very materially in school.)

"The Relation of the Home and the School" .....
....Col. F. W. Parker.

The work has not been rounded up for the year, as several more meetings and lectures are to be held.

HELEN M. HEFFERAN,
Secretary of Normal Park Round Table,

CHICAGO, ILL.

FROM ROCKFORD, ILL.

No. 1. What I have heard and read has helped me to watch the children more closely, and to understand some of the reasons why children do certain things.

Physically: I have been able to help the children as to seeing and hearing. I cannot express the gratitude I feel toward to Child-Study movement in these particulars. Children, *thought* to be careless and inattentive, could not hear. Children were idle because they could not see the work on the blackboard.

Mentally: Because, when the defects of seeing and hearing were in a measure overcome, the child could do what was required of him.

Morally: Because indifference, idleness and their attendant evils were put in check.

No. 2. I have tried to make a special study of some of the children, using the blank forms kindly sent by Prof. O'Shea, of Buffalo, for that purpose. I send them, hoping they may be of some service.

No. 3 (*a*) I have. (*b*) Some were due to causes possible to be removed. Others could be helped in a measure.

(*c*) Child-Study led me to watch them carefully day by day with the wish to be able to help them, and to make inquiries into the causes of the defects.

(*d*) In some cases the defect was discovered accidentally; in others the defect was discovered after considerable study and investigation. In either there was almost immediate improvement mentally and morally in the child.

No. 4. Volume 1, No. 2, page 19. "The Social Sense," by J. Mark Baldwin.

Page 21. "Habit-degeneration," by F. B. Dresslar.

Page 29. "Fears in Childhood," by G. Stanley Hall.

Page 48. "The Study of the Child on Entering School," by C. C. Van Liew.

Also in Volume 1, No. 3, The work and suggestions, by Mrs. Lida B. McMurry.

CHILDREN'S MORAL AND RELIGIOUS CONCEPTIONS.

1. Name of child observed, Ruth P.; age, 6 years; nationality, Swedish; occupation of father, secretary of furniture factory.

1. Why should we be good? Name some things that are wrong?

Ans.: We would go up in Heaven then. To hurt or kick any one. Not to mind your mamma. To take things without asking.

2. God—How does he look? Where is He? What does He do? Does God love you? Do you love God?

Ans.: God has a good face; he has long hair and wears a white dress. In heaven. He works. If I am good, He does. Yes, of course.

3. Heaven—Where is Heaven? What do people do there? What will children have there?

Ans.: Up high. Sing and wear white dresses. I don't know.

4. Angels—How do angels look? What do they do?

Ans.: They have big, big wings. Fly, and take care of people.

5. Sunday—What is Sunday for? Do you like Sunday? Why do we go to church?

Ans.: To go to church. Yes, because papa takes us out walking. To hear about Jesus and the angels.

6. Bible—What is the Bible? Why do we learn Bible verses? Can you tell one?

Ans.: A big book. Because my mamma wants me to. No.

2. Name of child observed, Willie; age, six years; nationality, German; occupation of parents, father not living, mother laundress.

1. Why should we be good? Name some things that are wrong.

Ans.: So we will be good men when we grow up. To swear, to lie, to shoot little sparrows.

2. God—How does he look? Where is He? What does He do? Does God love you? Do you love God?

Ans.: God has a good face. Up in heaven. He tends to little children. Yes, ma'am. Yes.

3. Heaven—Where is heaven? What do people do there? What will children have there?

Ans.: Way up high. Don't know. Wings to fly with.

4. Angels—How do angels look? What do they do?

Ans.: Nice. Fly around to get fresh air.

5. Sunday—What is Sunday for? Do you like Sunday? Why do we go to church?

Ans.: To go to Sunday school. Yes, ma'am. To learn something.

6. Bible—What is the Bible? Why do we learn Bible verses? Can you tell one?

Ans.: A book. So we can learn about Jesus. "Now I lay me down to sleep."

3. Name of child observed, Mariam R.; age, six years; nationality, American; occupation of father, works in a printing office.

1. Why should we be good? Name some things that are wrong.

Ans.: To mind our mothers. To run away, not to mind, to steal.

2. God—How does he look? Where is He? What does He do? Does God love you? Do you love God?

Ans.: God is a nice-looking man. Up in heaven. He looks at the children. Yes, if we are good. Yes, because He is good to us.

3. Heaven—Where is heaven? What do people do there? What will children have there?

Ans.: Up in the sky. Sing. Wings.

4. Angels—How do angels look? What do they do?

Ans.: An angel looks like a woman with wings. I don't know.

5. Sunday—What is Sunday for? Do you like Sunday? Why do we go to church?

Ans.: To be quiet and good. Yes, ma'am. To hear about Jesus.

6. Bible—What is the Bible? Why do we learn Bible verses? Can you tell one?

Ans.: A book that tells about God. To learn about Jesus. "The Lord is my Shepherd."

IDEAS OF FUTURE OCCUPATION.

1. Name of child observed, Hannah C.; age, 13 years; nationality, Swedish; father's occupation, tailor.

Has the mother any occupation outside of the home?

None.

Is she engaged in religious work?

Not particularly.

Is she given much to society?

No.

With people of what profession, calling, or occupation does the child come in contact most frequently?

The common laboring class.

Ans.: Hannah C., age, 12 years; February 26, 1896.

What I want to do when I am a woman:

I want to keep house when I am a woman because it is so nice to do so, and it is so nice to wash and bake, and to wash the dishes and sweep the floor and many other things.

2. Name of child observed, Elmer L.; age, 10 years; nationality Swedish; father's occupation, a policeman.

Ans.: Has the mother any occupation outside the home?

No.

Is she engaged in religious work?

No.

Is she given to society?

No.

With people of what profession, calling or occupation does the child come in contact most frequently?

The uneducated, lower laboring people.

Ans.: Elmer L.; age, 10 years; February 26, 1896.

What I want to do when I am a man:

I want to be a policeman if they will let me because it is much pay. I like the job. It is easy work, because my father is one.

3. Name of child observed, Harold H.; age 9 years; nationality, Swedish; father's occupation, dry goods merchant.

Has the mother any occupation outside of the home?

No.

Is she engaged in religious work?

Not particularly.

Is she given much to society?

No.

With people of what profession, calling or occupation does the child come in contact most frequently?

The educated class of the common laboring people.

Ans.: Harold W. H.; age 9 years; February 26, 1896.

What I want to do when I am a man:

I want to be a good man. I want to be a real estate man. And be kind to the poor like my father and mother are. And live in a big house. I want to do work, too.

4. Name of child observed, William L.; age, 9 years; nationality, American; father's occupation, Congregational minister.

Has the mother any occupation outside the home?

None.

Is she engaged in religious work?

Yes, very largely.

Is she given much to society?

Only in connection with her duties as a pastor's wife.

With people of what profession, calling or occupation does the child come in contact most frequently?

With cultivated, refined and educated people.

Ans.: William L.; age, 9 years; February 26, 1896.

What I want to do when I am a man:

I want to be a minister when I am a man. I want to be a minister because my father is and his judgment is better than mine, and he knows the best thing to be, and so I am going to copy after him.

5. Name of child observed, Hazel M.; age, 9 years; nationality, American; father's occupation, traveling salesman.

Has the mother any occupation outside the home?

No.

Is she engaged in religious work?

No.

Is she given much to society?

Yes.

With people of what profession, calling, or occupation, does the child come in contact most frequently?

People of fashion and society.

Ans.: Hazel M.; age, 9 years; Feb. 26, 1896.

What I want to do when I am a woman:

When I grow up I want to go to Chicago, and I want to be very rich. I would like to live in a very nice house. I want a good many friends. I want a nice husband, and I would like two children; I want a little girl and a little boy. I do not want to work. I want my children to marry very well.

6. Name of child observed, Hattie H.; age, 11 years; nationality, American; father's occupation, works in glucose factory.

Has the mother any occupation outside of the home?

None.

Is she engaged in religious work?

Only such as might come to any woman in any church society.

Is she given much to society?

No.

With people of what profession, calling, or occupation, does the child come in contact most frequently?

With people of refined and quiet tastes.

Ans.: Hattie H.; age, 11 years; Feb. 26, 1896.

What I want to do when I am a woman:

I want to be a bookkeeper when I am a woman.

I want to be a bookkeeper, so I can earn some money for my mother.

I want to go with good company, so everyone will love me. I want to be kind and good.

MARY E. NORTON.

ROCKFORD, ILL.

FROM THE KLINE ST. SCHOOL, WILMETTE, ILL.

In an answer to the first question in the circular received, I would say that I find it of value to remember that mental fatigue accompanies physical exhaustion and to plan the children's studies so that those requiring the closest mental application shall be given them while they are full of energy, and those that require less intense observation, such as illustration of stories told, work with the ruler at the board, and drawing, later in the school day. I find, too, that the letters of a word arouse no concept of the word, but that taken as a whole it is easily remembered, and that new words are quickly recognized by "sounding" the letters.

I find in my work with the first and second grades that the thought expressed is stamped upon the memory, and that the desire to obtain and express ideas is a sufficient incentive to pursue knowledge for its own sake, and to insure close application to the work required in the school room.

I have between fifty and sixty pupils between the ages of six and ten, and have never known their interest in a new subject to lessen until it had been thoroughly discussed. I account for this principally from the fact that they are expected to bring in some part of the material for nature-study as each subject recurs in turn, and this gives them a feeling of responsibility for the results of our observation. Also new work in connection with observation of subjects for nature-study is learned much more readily than when learned without such connection.

I find, too, with all dispositions, that it is best to ignore the opinions of visitors as an incentive to good work, and when we have special programs, while I encourage the pupils to invite their parents to be present, I avoid all allusion to them as critics, and if no one accepts our invitation I never express regret, but conduct the program with exactly as much carefulness.

In answer to the second question I would say that I have begun some data to send to G. Stanley Hall, but have so little thus far that I cannot prepare it for this call.

Since my acquaintance with Child-Study I have been more careful to inquire into the cause of backwardness on the part of a pupil, and have frequently found that it could be removed. I had a case that seemed to be color-blindness, on the part of a boy who is "cross-eyed," and although he has not yet been treated, I have found by persistent training that the supposed color-blindness was only one phase of a lack of the habit of concentration on the part of the child. He is a delicate boy of seven, and this is his first year in school. The same boy is only just beginning to show a knowledge of form sufficient to write a single letter at a time, instead of the whole word that I am accustomed to give his class. But I approached him through his concept of time, which is good, and allowed him to lead the class in marching from the room, which had the effect I had hoped for in firing his ambition. Another child I thought dull until I found him so near-sighted that his face almost touched the blackboard before he was near enough to see what was written upon it. His trouble has been set right by glasses which I urged his mother to procure for him, and he has advanced in his studies since with a "bean-stalk" rapidity. I have a case of catarrh, in fact two of them, both bright children, but hindered by days of deafness and headache. One is now being treated for the disease and already looks better, but the parents of the other speak only German; so it is hard for me to make them understand. I intend to appeal to a married sister of the child, a boy of seven. I think for the number in school that my pupils average remarkably few defective ones, but I shall watch them closely.

In answer to number four I have made use of the syllabi in the transactions to arrange my observations of the pupils mentally, and have begun to write out some individual data for G. Stanley Hall, but it is not in a form to present here. The syllabi are a fine help in systematizing one's ideas on this subject.

HARRIET HARPER,

Teacher of First and Second Grades, Kline St. School.

WILMETTE, ILL.

AN INDIVIDUAL STUDY OF DRAWINGS MADE BY FIRST-GRADE PUPILS.

Drawings made by first-grade pupils may be made very useful in furnishing an index of the children's mental characteristics. But if these results are to be of any value they must be capable of being applied to the individual child. We have great masses of statistics gathered from thousands of instances whose object is to furnish an average of mental traits in one direction or another. I do not see that the knowledge of the fact that say fifteen thousand out of forty thousand children drew one part of a story and ignored the rest, has any bearing with the teacher in her treatment of John or Mary. The point of real importance is, what part did John draw? What part did Mary draw? And it is of importance only in the case of John and in the case of Mary. What we need is not so much mass work, not so many thousands of cases to draw averages from, but careful, patient investigation in the case of each individual child.

The writer used drawing as a test of the powers of perception, memory and imagination of a class of eighteen pupils, ranging from five to seven years of age, in the Primary department of the Normal Training School. The class had been in school seven months. The method of testing was as follows:

1. *In Perception.*—The object was placed before the child and after making any kind of examination of it he wished, he drew it, the object remaining before him.

2. *In Memory.*—The object was placed before the children as a class. The examiner called their attention to certain characteristics, so as to be sure that they all had the same material to remember and then removed the object, and had it drawn as remembered.

3. *In Imagination.*—The child was told to make up a story about a boy and a dog or any familiar animal, and then to make a picture of it.

In no instance did two children draw at the same table.

The grading was done in the following manner:

1. *In Perception.*—The examiner counted up the number of different elements found in each set of drawings and taking that as the standard, compared each individual drawing with it, making the number of different elements or the amount of detail the decisive factor.

2. *In Memory.*—The method of grading was essentially the same as in perception, except that the number of elements pointed out by the examiner was taken as the standard.

3. *In Imagination.*—The greatest number of different elements found in any one drawing was used as the standard.

In this way statistics more or less truly indicative of the comparative powers of the children in perception, memory and imagination were secured.

From the study of these statistics, the following facts were noticed:

1. In thirteen of the eighteen cases, there seemed to be a distinct relationship between the grades in perception, memory and imagination, the greatest variation in any one case being a difference of 12 per cent between perception and imagination.

2. The highest average made by any one pupil was 82 per cent, the lowest 38 per cent.

The average of the whole class on perception was 59⅔ per cent, on memory 5 1-9 per cent, and in imagination 60 per cent.

4. The various averages of the individuals afforded a means by which they were ranked. The opinions of the teachers of these children agreed with the order in which they were ranked in all but three or four cases out of the eighteen.

Now comes the question of the application of these statistics to the needs of the individual child. Suppose that the drawing examiner finds that James has an average in perception of 35 per cent. He apprises the science teacher of that fact, and she immediately understands the cause of his poor work and sets about correcting it. Or the examiner finds that Mary has a low average in memory. He notifies Mary's arithmetic and reading teachers, and they see that what Mary needs is drill in grasping and holding ideas. If John's imaginative

powers are found to be less than the average of his class, his reading teacher must pay particular attention to securing an instantaneous response with a mental picture to an external suggestion.

In short, the system serves to establish the standard of the mental powers of the class, to detect the exact place of each child's development that is exaggerated or minimized, and in that way suggests a particular way in which each child must be treated according to his individuality.

BELOW IS A TABLE SHOWING THE RESULTS OF THE TERM'S WORK IN STUDYING THE CHILDREN THROUGH THE DRAWINGS THEY MADE:

	PERCEPTION.	MEMORY.	IMAGINATION.	AVERAGE.	RANK.
Claire	80	83	84	82	1
Clyde	52	41	41	44	16
Edith	57	85	59	67	7
Elmer	56	59	68	54	11
Henrietta	55	51	92	66	8
Leverett	75	85	84	81	2
Mary	77	69	74	73	4
Raymond	71	70	63	68	6
Stephen	80	68	76	72	5
Thurman	77	69	76	74	3
Claude	61	39	62	54	11
Earl	60	55	41	52	12
Effie	43	38	35	38	17
Fred	61	34	40	45	15
Ralph	50	49	51	50	13
Thornton	59	66	38	55	10
Walter	65	53	55	58	9
Mildred	58	50	32	47	14
	Av. $59\frac{2}{3}$	Av. $59\frac{1}{9}$	Av. 60		

FRANK S. BOGARDUS.

NORMAL, ILL.

INFLUENCE OF TENEMENT HOUSE LIFE ON THE NERVOUS CONDITION OF CHILDREN.

The statement has often been made that the children of the poor who live on the streets are brighter, more alert, quicker in their perceptions and keener than the children of the more prosperous classes. I have asked myself if this was true? and if so, why was not this brightness of youth redeemed by the same superior sagacity in maturity? I have studied the question as a psychological one, taking the youngest children in the crowded section of the East Side, so well known as the most densely populated section in the world. I believe the fact is true that these children are brighter than the children of other classes, and that the explanation is to be found in the analysis of their social environment. The child of the rich in infancy is protected from noise, from sights and sounds, from everything that excites alarm or over-stimulates thought and feeling. It is even kept away from the rest of the household and sees as few people as possible; quiet and sleep are its entourage. This might be considered his biography to the age of two. The child of the poor, however, is born into a household occupying two or, at the most, three rooms. In our New York tenement houses there are four families on each floor and four to six floors in the building. Privacy within the family is impossible. The family of four or five makes constant use of all the rooms, disturbing one another frequently. The older children will get away, if they can, but the baby will be disturbed in the morning when the father gets up to prepare for work, when the older children are made ready for school, by the mother's work of cleaning and cooking, by the return of the children at noon and in the afternoon, and by the coming back of the father at night, by the visit of neighbors in the evening and the retiring of the rest at a late hour. Then there is a noise of tramping on the floor above and the floor below, the tramping in the hall and the shouts and screams of other children. Here is an atmos-

phere of noise provoking nerve stimulus and nervous excitement at once.

I have found that in the warm weather, when the heat makes tenement house life insufferable, the children in our kindergarten would go to sleep in the afternoon session or would come late. Upon inquiry I learned that they usually were not put to bed until midnight and would be awakened at five or six. The babies, too, I noticed, would be taken out to the door-step, that the mother might have a little fresh air, and there be compelled to hear all the turbulence of the street and behold its rush and glare.

From two to five a new state of sensations is introduced. It is the time for kindergarten training. The children of the poor get a kindergarten training much more developing than is given to the children of the rich. Almost as soon as it can walk the child creeps out into the hallway and soon toddles down the staircase. The neighbors in the hallway will treat it with indifference, while those of the next floor will, perhaps, be rough and cross. The minute, therefore, that he moves out into the world, his over-quickened sensibilites are set at work to make distinctions. He distinguishes friend and foe, and learns to realize that weakness can only circumvent strength by cunning. He clutches his own and finds that if he lets it go he is not likely to get it back. He is not likely to throw away recklessly his playthings, because he has too often seen that an instant's dropping gives some other child an opportunity to pick up his toys and run off while he howls impotently.

Once on the street, he encounters the barbarian world and quickly is taught that the stranger is an enemy, and if he does not learn this at once a few shoves and pushes soon teach him better judgment. He is snatched from under cart wheels and shaken vigorously, as I saw a child not long since who fearlessly and with perfect trust was taking hold of the tire of a dray wagon. Usually within this period moral distinctions are made. He is able to make a careful study of drunkenness, is taught profanity, learns to look indifferently on a fight, and to hate law and order in the person of a policeman as a disturber of his own amusements.

Here, again, we see the abnormal awakening of the moral sense quite different from the care taken by other parents who keep children from seeing the moral crookedness of humanity. By six he comes to count himself as an independent force, making his alliances offensive and defensive, and encounters enemies, eludes pursuit, becomes skilled in tricks of the street, has his independent ideas of humanity in general and of how to make his way in the world. This may seem a little fanciful to some. Conversation with many children, however, shows it to be the simplest reality.

I find, therefore, quickened nervous sensibilities, an alert moral sense and a mature philosophy at a time when other children are just beginning to play a few simple games, carefully guarded by attendants and family.

This brightness seems to last until about fifteen, at which age the child of slower growth overtakes the poor and by twenty at latest has surpassed them. The over-strained brain becomes weary, the power of moral distinctions is weakened, alertness is gone. It is only the record of any day when we have awakened too early. The advantage over the world in the early morning is made up before night.

Many of the mental and moral characteristics of the lower laboring classes could be explained by a more detailed analysis of the data and results stated. But my examinations have been sufficient to lead me to attribute to purely psychological grounds the explanation of the question raised and the difference between the children of the poor and the rich.

JAMES B. REYNOLDS,
Head Worker University Settlement Society, New York City.

FROM HUMBOLDT, IOWA.

Replying to the questions I will say we recently made some tests on a class in penmanship to see if the pupils with all the all-round best mental faculties would increase relatively in accuracy and rapidity of writing more than others. From tests on a class of 37 each school day for six weeks we concluded that they would.

At another test, I had them write as many words as they could in each of several periods of three minutes (same word, "mine," all the time) with the right hand, averaged the minutes and put down the record. Then the same with the left hand. They did not try with the left hand for thirty days, but tried with the right hand each day, keeping the record. At the end of thirty days we found they had gained in speed proportionally as much with one hand as with the other. I did not find that age changed the results.

I have been making some observations as to the workings and the results of Sunday schools as aids to moral culture. While I do not in any way challenge intentions, I cannot help saying I believe the results are far inferior to what they would be if those who plan the course and those who teach knew more of children and child-nature. No denominations, so far as I can find, make any attempt to arrange a course adapted to the different ages of children, though some simplify the language for the primary pupils.

I believe three grades would make a fair arrangement. For children up to the age of puberty, examples that they may imitate or lessons that may be presented in a concrete form. For pupils from puberty to about 20, lessons of beauty both in the subject matter and the way it is presented; and for the older ones spiritual truth, giving lessons of any kind.

From what I have observed so far, children get little or nothing from their Sunday school lessons. One class of about seven boys contained just one who could tell any benefit he had derived from Christ's having come. That boy said,

"I don't think I would have got any Christmas presents if Christ hadn't come." He was a minister's son. Another boy, after the lesson on David and Goliath, went out of the church, and before he had gone five rods said to another boy, "Down, Goliath," and he attended to it that the boy kneeled to him.

It will be noticed that the three divisions noted above are adapted to the child's reading matter of whatever kind it may be, and that they follow, as I believe, a constitutional desire of the child. For first a child is a materialist, next an emotionalist and great lover of the beautiful, and lastly, he is able to deduce abstract spiritual truths.

A. D. CROMWELL,

HUMBOLDT COLLEGE, HUMBOLDT, IOWA.

FROM THE PRACTICE-SCHOOL OF THE ILLINOIS STATE NORMAL UNIVERSITY.

I offer the following brief report of the results of tests made in the first and second primaries under my care, upon the sight and hearing of the pupils, as an indication of the need and practical value of such work in understanding the physical limitations of children, even in the primary grades. Simple tests, such as would reach the practical results most readily, were used in all cases. Dr. Krohn's Test Card was used for sight. Our idea in making the tests was simply to know something of the condition of our pupils physically, so as to be able to accord them a more rational physical treatment.

In the First Primary, out of a class of 28 examined, five were found to be more or less near-sighted. None were far-sighted. Of 33 examined as to hearing, five were found to be very hard of hearing.

In the Second Primary, out of a class of 46 examined, three were found to be short-sighted and three far-sighted. Of the same number, six were found to be very hard of hearing.

These children come from families of average surroundings and culture. We find that our judgment and treatment of these children is very materially affected by this simple information as to their relative sense-capacities obtained by simple means.

MRS. LIDA B. MCMURRY,
Critic Teacher Ill. State Normal Univ.

NORMAL, ILL.

FROM THE WALLACE SCHOOL, STERLING, ILL.

I shall not attempt to answer the questions systematically, as my work is with the beginners, and the testing done is largely watching the emotions of the child.

Child-Study has made me feel more kindly toward the children; and when parents found that I was looking after the physical condition of their children, their interest in school and in me was aroused and increased.

Again, Child-Study has caused me to meditate whether the work I give them is adapted to each individual child or not. I look after their mental growth more, and think of their home life more.

In the fall a bright, strong, willful-looking boy entered school. He had had little training at home, judging from his sister and his mode of playing with mates. He was slow to obey, and always looked at me with the expression, "I will do what you ask when I am good and ready." To my horror I discovered, one day, that this boy could not hear at all with one ear, and that he had had scarlet fever when small.

We have made a bench for a little girl whose feet could not touch the floor, taken out another, and seated all with regard to defects in sight and hearing.

I have taught twelve years, and this year my attendance is *par excellence*. Much of this I attribute to Child-Study.

ANNE DURR.

WALLACE SCHOOL, STERLING, ILL.

FROM THE WALLACE SCHOOL, STERLING, ILL.

1. What I have heard and read on the subject of Child-Study has helped me to a better understanding of the relation between a child's mental and physical growth. Also it has given me more knowledge as to the influence of the child's previous environment on his conceptions of school life and his relations to his companions. I have tried to gain some knowledge of each child's home life and the character of his parents, what his habits and amusements are, and the amount of physical labor he is compelled to perform. I use this knowledge to determine the character of such individual instruction as I am able to give him.

2. No.

3. During the first month of the term I tested the sight of all my pupils and the hearing of those who I had any reason to suspect were deficient in that respect. In 35 pupils, four were deficient in sight. Two of these had been treated by oculists; one had been greatly benefited, the other slightly. One was slightly near-sighted, not seriously. The fourth child's trouble is hereditary, and will require hospital treatment. One child was deaf, seemingly from catarrh, and is now under treatment.

4. Have used part of "Directions for Study of Child on Entering School," and a few points from some of the other syllabi.

JESSIE M. BUYERS.

WALLACE SCHOOL, STERLING, ILL.

FROM MT. ETNA, IND.

1. Child-Study has given me a better understanding of what may be required of children and of what should not be required of them. I also pay more attention than formerly to seating the children and lighting and ventilating the room. Perhaps more than in any other way, the observations made in Child-Study have given me a real pleasure in the society of children.

2. Have made no special study of children.

3. At the beginning of the term I tested the eyesight of all my pupils. Those whose sight was in any way defective were seated nearer the blackboard when any work was to be copied from it. I found two pupils whose hearing was so defective as to interfere with their school work, also several others who are somewhat dull at times as a result of catarrhal troubles.

4. Prof. Bryan's suggestions in Vol. I., No. 1, and Dr. Meyer's paper in the same, have been of most service to me, I think. Several others have been helpful.

J. M. LARGE.

MT. ETNA, IND.

FROM THE SUPT. OF SCHOOLS, ROCKFORD, ILL.

In answer to your Special Circular No. 1, I can state:

1. Child-Study has called my attention, as well as that of my teachers, to many things relative to the physical, mental and moral condition of our pupils which we had not thought of before.

2. We have looked after the sight and hearing. One child has been assisted whose eyes were almost entirely ruined, and the oculist said they were saved by the teacher's observation.

P. R. WALKER.

ROCKFORD, ILL.

FROM DECATUR, ILL.

I cannot answer the questions in Special Circular No. 1 definitely, neither can I let them pass. I am too much interested in the subject.

1. What I have read on the subject of Child-Study has helped me to observe children more intelligently, to look for hidden causes, and especially to seek for physical reasons in cases of moral perverseness.

2. I have made some special study of children, but results are another thing. I might write my observations and opinions, but facts I am not sure of. I have been observing one child especially for four years, another for two, and am keeping a record; but I take it this is not what is wanted.

3. I have had under my care many children whose mental powers were defective or dormant. None were traceable to physical defects which I could remedy. I have found catarrh, scarlet fever, kidney disease, the tobacco habit (especially in the mother), and other habits more remote, among the causes.

4. I have used Dr. Hall's syllabi ever since he began to publish them, and have sent him some observations and data which I have gathered. MRS. A. E. MURPHY.

DECATUR, ILL.

FROM BUFFALO, N. Y.

I send my answer to the special circular lately received from the Illinois Society for Child-Study. My answers are made from the standpoint of a parent and may not be of much value, but you are welcome to make any use of them you desire.

Question 1. I have given more "ear" instruction to balance the inclination to "eye-mindedness" in my oldest boy of eight years. I have *told* more stories to all three children, instead of expecting them to sit still and listen to me read.

Question 2. No special study except such experiments and observations as have been suggested by Miss Anna I. Davis of the Buffalo School of Pedagogy to the members of our Mothers' Class.

Question 3. No.

Question 4. I have prepared a day book for each of my three children aged eight, five, and two respectively, but the records are not such as can be condensed and no average can be made from observing only three.

I have found the publications of the Illinois Society for Child-Study of great help in studying my children, and I am glad to bring the Society to the notice of my friends. I hope it may be sustained so that its influence may reach even the public schools of Buffalo. MRS. HELEN P. KENNEDY.

BUFFALO, N. Y.

FROM THE NORMAL COLLEGE OF NEW YORK CITY.

I have on hand about 300 compositions by young ladies of 18 to 20, on "How I was Educated"—stopping at the age of 14. They contain much of interest but I have not been able to read them all, or to generalize.

We have collected many hundreds of observations in our training department which we are gradually classifying. A few of these appear monthly in our college paper. I enclose a series of questions that have been answered this year by all the members of our senior class. They were asked partly to suggest that similar questions should be asked by all teachers, and partly to gather information that may prove useful to me in the future. We have quite a collection of children's drawings.

I enclose for you a short report on a question to which I am still securing answers, and hope in the future to report more fully. So far I have answered Question 2.

As to Question 1, I can say that while for many years I have been studying children—my attention having been attracted to the subject over 20 years ago by a little English pamphlet on "What is a Child?"—still this new movement has helped me exceedingly in making me more considerate of the peculiarities I find in my pupils of *eighteen and over*. It has always helped me in understanding children's tendencies to lie and steal, etc., one case having particularly interested me. I feel constantly how much less I know of children than I should if this movement had started 20 years ago, and this notwithstanding I have always been especially interested in children through the kindergarten. I want to commend the Handbooks. They have been very helpful. I hope they will be continued. The Child-Study Monthly is also an excellent magazine, and perhaps meets a more *popular* demand. I hope both will be continued.

JENNIE B. MERRILL.

NORMAL COLLEGE, N. Y.

The three following pages contain a brief report on "First Reminiscences," and several syllabi used in the Normal College of New York City, contributed by Miss Merrill:

REPORT ON FIRST REMINISCENCES.

The 136 graduates of '93 who wrote answers to the question, "What is the first thing you remember?" will be interested in the following summary obtained from their papers:

Cases of fear, etc., 60 per cent.

Cases of pleasure, 40 per cent.

The cases of fright include falls, children lost, fright by animals, etc. Some of the pleasant remembrances relate to travel and to pet animals. The largest number of incidents classified under one group relate to animals, 11 being pleasant memories and 7 unpleasant. Next come falls, 15. Third, incidents connected with traveling and moving into new homes, 14. The last group indicates the force of "associations of place."

The age was not given in all cases, but as far as given, we find:

At	5	years	37	incidents.
"	4	"	41	"
"	3	"	10	"
"	2½	"	4	"
"	2	"	4	"

STUDIES USED IN THE NORMAL COLLEGE OF NEW YORK CITY.

I. QUESTIONS ANSWERED BY SENIORS.

1. Name. 2. Residence. 3. Birth-place. 4. Have you ever been anywhere else (in the city or in the country)? Where? How long? 5. Places visited, day or longer. 6. What mountains or hills have you seen? 7. What rivers? 8. Lakes? 9. Oceans? 10. Have you ever visited a factory? Describe. 11. What museums? 12. What art galleries? 13. Mention *all* schools you have attended. 14. What kindergarten? Give details. 15. Have you ever visited any schools? 16. Have you ever made any collections? 17. Have you ever made any objects useful or ornamental?

1. Name. 2. Can you sing? 3. Play on any instrument? 4. Have you ever done either, in public or in private company? 5. Favorite study? 6. Favorite author? 7. Favorite poem? 8. Favorite song as a child? 9. Of what most fond in nature? 10. Are you a close observer? 11. Do you learn most readily through ear or eye? 12. What do you enjoy most, music or paintings? Paintings or sculpture?

II. REMINISCENCE.

1. How old were you when you first played in the street? 2. What were your first plays, and from whom did you learn them? 3. Name other plays that you remember up to the age of 12 or 14? 4. What plays did you see other children play which you did not engage in? 5. Tell about how much time you spent in the street, and whether you enjoyed playing there. 6. Were there children who acted as leaders in play? Were there any who invented plays or modified them in any way? or did they hold strictly to the manner of playing them? 7. What plays have you observed in the streets recently? State circumstances fully in regard to (*a*) locality, as presence of factories, parks, open lots, buildings; (*b*) current events; (*c*) season of the year; (*d*) time of day. (*e*) In what ways

and at what ages do you find boys and girls playing together? 8. Have you ever seen children play kindergarten games in the street? Where? 9. State instances of self-control, suffering pain voluntarily in play, or other moral qualities and lack of them. 10. Do not fail to report the simplest acts of play as well as regular games; also accounts of children playing alone. 11. What objectionable feature, if any, have you found in street plays? What advantages?

III. DEVELOPMENT OF CHOICE IN CHILDHOOD.

(*a*) 1. Give instances where you have allowed a child his choice in any matter. (State age, sex, nationality and circumstances leading to the choice.) 2. Did the child desire to choose? Did he choose promptly? 3. Was his choice independent or influenced by others? 4. Under the same conditions, did he always choose in like manner? 5. Have repeated acts of choice made him readier to choose? 6. Have the acts of choosing had any effect upon the child's habit of obedience? 7. Did he become willful or was he ready to submit when choice was impossible? 8. Give any other details that occur to you showing either immediate or remote effects.

(*b*) Were *you* allowed freedom of choice as a child? In what particulars? Results as you see them now?

(*c*) Report cases that have come under your observations although not under your management, and cases known to you upon reliable evidence.

THE WORK IN NEW YORK STATE UNDER THE DEPARTMENT OF PUBLIC INSTRUCTION.

The work was undertaken at the beginning of the administration of the present State superintendent, Charles R. Skinner. The supervision of the work was placed in the hands of Professor Charles H. Thurber, then of Colgate University, Hamilton, N. Y., now of the University of Chicago. Miss Anna K. Eggleston was delegated for the Institute corps to present the work to the teachers. The State Department of Public Instruction felt justified in taking up the work only from the point of view of its practical value to teachers and pupils. The aim, therefore, was first of all to interest as large a number of teachers as possible. Some peculiar features of the New York State school system facilitated this effort. The institute season there lasts the entire school year. The institutes are managed through the Department of Public Instruction and are conducted mainly by a special corps of teachers employed by the department. Miss Eggleston was one of these special instructors and was delegated to present the work at teachers' institutes. She reached two of these institutes on an average each week, the attendance being practically compulsory. An opportunity was therefore offered to reach from 500 to 800 teachers a week. Professor Thurber also addressed certain institutes. Under the direction and at the expense of the department certain printed material was provided as follows:

First—A pamphlet entitled "Hints on Child-Study," which contained in such a form that teachers could carry it away with them for permanent observation, some of the material presented orally at the institute.

Second—Blanks for special observation on individual children, after the plan followed by Principal Russell of the Worcester Seminary School.

Third—A plan of study on Children's Hopes, here given in full.

PLAN OF STUDY ON CHILDREN'S HOPES.

Studies have been made of Children's Fears and Superstitions; it means well to undertake a study of Children's Hopes. If successful, the study will show a number of points of great pedagogical interest. In this study the teacher must exercise great care *not to let the child know it is being studied.* This plan should not be left around the school room; preferably should not be taken there, so as to make sure that the children do not get hold of it. It is absolutely essential to success of this study that the children should be perfectly unconscious..

Use the usual kind of paper for composition work. If different pupils have paper of different kinds and sizes let them use it. Have each pupil put his or her name on the paper handed in. Then let the teacher add the age and sex of the pupil, the nationality, and the parents' occupations. These facts are very important for the final result, but *only the pupil's name should be put on by the pupil.* The teacher should add the rest.

The work to be done is very simple. All the pupils are to write compositions on the following subjects:

1. What I want to do next year, and why.
2. What I want to do when I'm a man (or woman), and why.

These should not be written on the same day, nor necessarily in the same week. Let children of all ages write, the smallest and the largest. The essays should be brought in as part of the regular work in English or Composition. If possible, make the children think it is fun to write these compositions. They will do better, and give us better results, if they enjoy the writing. Impress on them the importance of being serious and in earnest, and telling what they really do want to do next year or when grown up, and not some ridiculous nonsense.

You, yourself, the teacher, write down as well as you can remember what your own plans and hopes were when a child, and on the same lines as the children's essays. Such reminiscences from adults furnish very valuable material.

It will thus be seen that the plan of operations was first of all to arouse the teacher's interest by an inspirational talk;

in the second place, to give them something to look over and to guide future reading if they were sufficiently interested to proceed with it; and in the third place, to give them a simple definite task to perform, in the belief that the best way to interest anybody in anything is to give him something to do. The results were, on the whole, very satisfactory. But with some thirty thousand teachers in the State, of course only a beginning has as yet been made. It must be remembered, too, that this work does not reach the larger cities, but only the smaller towns and country districts. Children's Hopes was chosen as the topic for the first study, particularly because the papers returned would be sure to be of interest to the teachers themselves; partly, also, because it presented a very attractive, if possibly a somewhat indefinite field of investigation. Between five and six thousand papers have been received in reply to the questions asked in the syllabus. During the summer and autumn these were carefully classified and studied by Mr. James P. Taylor, Instructor in Pedagogy in Colgate University, at that time a graduate student in the University of Chicago. The results of Mr. Taylor's work are too extended to be summarized here, but it may be said, by way of suggestion at least, his investigations give results that promise to be of no little importance. Professor Thurber has prepared a report embodying Mr. Taylor's results and describing the work in New York State and elsewhere which is now in press as part of the Annual Report of the State Superintendent of Public Instruction. This special report on Child-Study was prepared with the intention of having it reprinted in pamphlet form for distribution among the teachers. It contains the Bibliography prepared by the Illinois Society for Child-Study, and a considerable number of syllabi and directions for work selected from the contributions of various investigators, all arranged with the object of stimulating further interest and study on the part of the teachers of the State.

C. H. THURBER.

MORGAN PARK, ILL.

CHILD-STUDY AT BUFFALO SCHOOL OF PEDAGOGY.*

I give below a statement of the courses in Child-Study in the Buffalo School of Pedagogy, together with the purposes of each and the beneficial results that have been derived thus far:

1. The aim of the first or preparatory course is to trace the history of the Child-Study movement, to review carefully what has already been accomplished, and to examine in detail the methods that have been followed by different investigators. Problems upon various topics concerning the physical, intellectual, emotional, and volitional growth and development of children through the period of adolescence, are first set before students, who are led to make personal observations in the Practice Department of the School of Pedagogy and in the schools of the city. Each student makes a report in class of the results of his investigations, and then the literature bearing upon each special topic is taken up and discussed. In this way it is the aim to direct the attention of teachers to the most important aspects of child growth and development, and to review all the scientific literature that is accessible. The topics are taken up in the order of physical, intellectual, emotional, and volitional growth and development; but the thought is continually kept in mind that in studying one phase of child-nature we are really dealing with the whole child. The books and periodical literature in the Buffalo library are all at our disposal, and large additions have been made at our suggestion, so that we are able to examine most that has been done in Child-Study that seems to be of value.

2. In connection with the work of this first course each student is responsible for making an original study which he has prepared under the direction of the professor in charge of the department. Each study is discussed by all members of the class as to its aim, its value, and the probability of getting any definite, reliable results from the method proposed

for its study. Sources of possible error are pointed out; and studies that have already been made along this direction, if any, are considered and the results and method followed are discussed.

3. The aim of the next course is to elaborate a method for the study of the individual child, adapted to the needs of the average teacher under the conditions of the ordinary class-room. All students go into the Practice School and there observe individual children according to an outline already carefully worked out; and after their observations each gives his results in class, these being thoroughly discussed by all members. The aim is to acquire skill in reading child-nature as manifested in the class room, and in suggesting how individual children should be dealt with. The whole purpose, in other words, is to lead students to observe signs carefully and interpret them correctly. So far as possible the observer is to gain her knowledge of the child without special tests; but when for any reason these are thought advisable, such tests are made upon the senses, the nervous condition of the pupil, and so on, as will give more accurate information than simple observation could possibly afford. Throughout all this work students are led to review their own childhood experiences, so far as they are able, in the belief that this will enable them to interpret more sympathetically and accurately the phenomena which they observe in the children being studied.

As to the results of these studies, it may be said that our students have already come to look upon the growth and development of childhood from a much more sympathetic and intelligent standpoint. Things that they had never before thought of, such, for example, as the prevalence of fatigue in the schoolroom, the conditions which promote it, etc., have come to be regarded by them as of the greatest importance to be observed in all the work of the classroom. In this way many matters concerning the physical, intellectual, emotional, and volitional growth and development of childhood are brought to the attention of teachers where they would probably never otherwise be thought of. In the second place, each student in making an original study has not only gained the special benefit which the results give, but she has

come to understand what the difficulties in making such studies are, and the great need of the most careful observation in order to secure any reliable data. It also brings her into sympathy with children of different ages by leading her of necessity to study them most attentively in their native heath, as it were. Lastly, this work has been of especial value in giving students skill in making out the individualities of children. At first we found that the thinking along this line was extremely indefinite. One child was thought of as about like every other child. There was little ability to observe comparatively important signs of different intellectual capacities, different temperaments, etc. But after considerable work of this kind with discussion in the class, we have found that there has been a great quickening of the powers of observation, and more intelligent interpretation of what is observed. This work has led to an appreciation of the need of every teacher's knowing something of the biography, the home life, the environment, the habits, the inherited influences, and especially those experiences of every child that may give him apperceptional material for the work of the classroom. It has made our students ready in detecting the common defects of senses, inadequate nutrition, etc., of school children, and has emphasized the necessity of keeping on the lookout for such things constantly.

M. V. O'SHEA,

Dept. of Ed. Psych. and Child-Study, Univ. of Buffalo, School of Ped.

BUFFALO, N. Y.

MINNESOTA ASSOCIATION.

At the close of the Child-Study Round-Table of the State Educational Association of this year, the Minnesota organization for the study of children was completed. After a number of conferences and committee meetings in which the central question was, What should be the chief objects of a State society for such study? it was unanimously agreed that the present practical demands of education should be of primary, and those of science of secondary, consideration. It was held that much could be done in collecting, analyzing and systematizing common everyday experiences that would be of assistance to all parents and teachers; it was believed that this form of work would help pave the way for other studies better suited to scientific purposes; it was also maintained that an important function of the society should be not merely to assist and encourage the specialist in his studies, but to prepare the public mind for his conclusions and to aid in the publication of those found to be of educational importance; and it was decided, therefore, to organize in a broad way with the aim of interesting and affecting parents and teachers. It was also recognized that the reflex influence and cultural value of Child-Study upon the teacher is very great. Probably the most important work which this society will undertake consists in the endeavor to awaken a warmer personal interest in children and their nurture, and to stimulate and direct its members toward a more scientific spirit and method in studying them individually. The words of Dr. Burnham best express the guiding idea of the Minnesota Association: "Child-Study is primarily for the teacher (observer); secondarily, for the children; and incidentally, for science."

This society is not, therefore, a scientific association. It does not discourage scientific work, but rather proposes to cooperate with scientific students; yet it wants to avoid the very appearance of a pseudo-scientific organization. There are only a few specialists, at present, among its members. The

present enrollment consists mainly of teachers and supervisors of elementary schools. These have joined for various reasons, but the motive that obtains most generally, I believe, is the desire to become keener, more accurate and more productive observers of children. All are to become *student-teachers*, teachers who recognize that their chief function is not to impart knowledge, but to study children, to find the factors that have influenced and are influencing their pupils, and to learn how they can counteract in one case and cöperate most effectively in another. Teachers are in a very real and important sense, original investigators. Most efficient instruction involves the discovery of the child who is to be taught. To know one child thoroughly involves little less of genius than to know about all children *en masse;* and to develop a child properly demands no less sagacity than to develop a law of science. We all want to become interested naturalists; we want to become abler observers of real, living, acting children. Withal nothing, or at any rate not much radically new is to be attempted. We shall recognize that good teachers and wise parents have always studied their children. We shall, in the main, aim to do in a somewhat better way what has been done already for a long time. As Supt. S. S. Parr, president of the association, puts it: "The new movement proposes to introduce a very important element, not previously present in a recognized form, viz.: the systematic and conscious carrying forward of what has heretofore been done in an unsystematic, naive and unconscious way." The members of this society are bound together by a common conscious purpose of self-culture and neighborly assistance.

The plan of the organization provides for general directive and advisory boards, and corresponding secretaries whose duty it is to organize and conduct work, according to the spirit and plans of the State society, in localities where proper interest can be awakened. The general officers elected by the association are a president, a secretary and treasurer, and three directors. These constitute the executive board. The advisory board is appointed from specialists whose fields of study and activity might make them interested and helpful participants in and contributors to the general work. The

three vice-presidents are appointed to look after the work in certain divisions of the State, and the corresponding secretaries, to care for the work in local centers. Anybody who is in sympathy with child-life and the study of children is eligible to membership. There are now enrolled on the membership list over one hundred, paying an annual fee of fifty cents.

Most of our members are strangers to systematic study of children. In all planning up to the present time, this has been borne in mind. Teachers as a rule need to be led into the spirit and method of this new subject and form of study; they, therefore, should read literature on Child-Study as well as observe children. Early work which is planned to engage the attention of the masses should emphasize the practical. Work, however important to science, which shows no immediate results of practical value will not long commend itself to hard-worked teachers. They will be loyal to Child-Study so long as they have faith that it can help the teacher in his work. Their loyalty exists for the child primarily, for the science secondarily. This view has shaped our planning so far, though no very extensive work has been done. There have been sent out already "communications" containing bibliography and outlines to direct in reading and reflection and in observational and experimental studies. The general topics suggested for study are: "The Eyes of School Children and their Defects"; "The Use of Stories"; "The Child"; "A Volume to be Read"; "Unnoticed Educative Influences"; "Movements of Children"; "A Study of Children's Readings"; "Plan and Method in the Study of Children."

LOUIS H. GALBREATH,
Sec.-Treas. Minn. Ass'n.

WINONA, MINN.

THE STUDY OF CHILDREN IN THE STATE NORMAL SCHOOL, WINONA, MINNESOTA.

The cultural value of Child-Study, its aid to teaching, and the concrete matter that it contributes to classes in psychology and methods furnish the motive for our emphasizing it. It does not seem wise to attempt much for the sake of science. Opportunity, ability and purposes of teachers forbid this. Not that scientific Child-Study is to be underrated; it deserves sympathetic co-operation of trained teachers and observers, and, therefore, should have right recognition and respect in training schools. But the primal duty of a teacher is the development of a child, not a science, and he must be trained to this end. His attention must not be attracted too greatly from the living, acting, growing child to the development of some law, however important, relating to children in general. Consequently, instead of collecting and collating data, generalizations and statistical results, we have tried to set before our students various purposes, plans and methods for getting acquainted with individual children. To describe our work completely, therefore, would be to characterize most of the common forms of observational, experimental and statistical study of children. Omitting this, I will merely call attention to two or three kinds of study more or less peculiar to us, or at least usually not much emphasized.

For four years we have carried on some studies in which student-teachers observe pupils working in classes, and make records which serve as a basis for oral discussions, in conferences with the critic-teachers, and for final written reports to Mr. E. A. Kirkpatrick, the general director of the work. The students are directed in their study by means of printed outlines of the following general topics: Attention, Perception, and Apperception; Imagination, Memory, Conception, Imitation and Habit, and Will. These plans aid in getting purpose in observation, a practical application of psychology, and, in consequence, a deeper interest and sympathy for individual

pupils and, therefore, a more efficient instruction and training.

We have employed two forms of memory studies very satisfactorily. In one of these it is aimed, through interrogation, to discover that content of the child's mind which can be used immediately for purposes of instruction. This is of daily application and accompanies the effort of the teacher to use memory in presentation. In the other, it is the aim through a statistical method, to attain some knowledge of the children's minds in a general way with other and, perhaps, broader purposes. By this means the teacher is often able to get glimpses of the factors which have played a greater or less part in the development of his pupils; he often finds that with which he can co-operate, or that which he ought to counteract; he may find memory richly stored with ideas which can do valuable service in acquiring new ideas and interests, or he may find a dreary dearth of what he might have mistakenly presumed upon as a basis for his instruction. This memory study has been found very helpful for class use in psychology and method. It presents a fresh and interesting body of concrete data to work upon; it tends to awaken a sympathy for the ideas and fancies, longings and strivings, likes and dislikes, hopes and fears of early childhood. We study early misconceptions and their causes, and often, through this means, get some new insight into those forces and conditions that direct the educative activities of children. In these classes, such topics as the following have been studied advantageously: Early Ideas of Natural Objects and Phenomena; Early Geographical Misconceptions; Interests in Special Subjects; Particularly Interesting Books and Characters; Ambitions of Childhood.

We have applied various sense tests with suggestive results; but in all of this there is nothing so distinctly different from what is common as to deserve description here. Perhaps an experiment which we have applied for two years in studying the working ability of students in the normal school is worthy of note. The study when first followed was made upon about seventy-five students pursuing the same courses of work in library readings. There were twenty-five articles in all to work

out. These students were divided into divisions of fifteen and the matter to be read into groups of five articles, so that every division had a separate group of articles to read. Everyone was to work out five articles. By this arrangement the fifteen students worked over the same materials. They were set to work under the same conditions, or as nearly the same as ordinary class assignments and regulations could determine them. Reports on all articles were made in which appeared (a) a statement of general purposes of the author, (b) an outline of the article, and (c) a summary of his conclusions. All students kept a record of time spent on every article. The following will fairly represent the results: (The Roman characters stand for the groups, the letters for the number of the article, and the figures for the greatest and least number of half hours spent on it.) I (a), 13, 5; II (b), 12, 6; III (c), 18, 6; IV (d), 14, 4; V (e), 6, 3. As great differences as are shown in these cases would appear, I believe, in any one of the remaining four articles of all groups. In the cases compared the quality of work did not vary greatly. The experiment seems to indicate noteworthy differences in ability to work in students who were classified together and assigned to do the same daily tasks. I am of the opinion that many tests of this character would convince us of something significant.

This year we have tested the eyes and ears, for strength of responsiveness, of all children in our model schools and the eyes of many students in the normal school.

We found these tests full of interest, and in many cases it has been possible to make helpful suggestions. The number of defectives and of the pupils needing help and caution was surprisingly large. In the plan for the study of the eyes, we found it valuable to try, first, to ascertain as much as we could through direct and painstaking observation; second, to inquire of pupils; third, to examine eyes. It was unquestionably shown, what most of us, perhaps, knew, that nothing short of an examination would meet the requirements. A comparative study of this nature might do something toward developing a number of signs and symptoms that could be of some practical service. It may be necessary to say in this place that we have no desire to name and characterize the

difficulties; that must be left to experts; but simple contrivances can be easily used by all teachers to demonstrate that in cases which need attention some departure from the normal exists.

In these tests we have found many interesting cases. Among them are the following: (1) A boy in the sixth grade who had been sent to our school because he could not get on well with his teachers and had not succeeded in his studies; found him, upon examination, to have poor hearing. His listless expression and mouth habitually open will lead to further examination for adenoid trouble. (2) A girl old enough for fourth, but who works in the third grade, was sent to us; seems very "nervous" and "eccentric." Examination showed exceedingly poor hearing; had found her seated well back in the room, and had seen her rebuked for apparent heedlessness to class directions. She is now doing well. (3) A boy sent to work with us in the third grade, who had one eye of practically no service to him at all and the other of about half strength. The father was aware of the defect, but gave no information of it to the teacher. He was finally examined by an expert, who verified the test made by the school. Glasses were procured. (4) A girl in the second grade with eyes about half power and unequal in strength. Father was ignorant of the defect, and teachers were unable to detect it by observation. Sympathetic treatment in school exercises the only result up to date. (5) A boy in the third grade found to be completely blind in one eye and to have poor sight in the other. Defect not discernible to an observer. More sympathetic treatment. (6) A girl in fourth grade; eyes about 4 and 6, with the normal 10. Not noticeable to observation. Child sometimes complains of fatigued eyes, but mother thinks she wants to wear glasses and will not listen to her. Through inquiry it was ascertained that last summer she read from three to five books a week, often reading by gas-light some feet above her head. (7) A boy in the sixth grade with myopia trouble apparently developing; trouble suggested through facial expression; parents crowding the boy that he may "make a grade." (8) A girl in the seventh grade wearing glasses, with eyes considerably under the nor-

mal. Upon inquiry it was found that she had put on glasses about a year before on occasion of an attack of the St. Vitus dance. Before this sickness she was troubled with headache a great deal, but since little or no affection of this kind is appreciable.

LOUIS H. GALBREATH.

WINONA, MINN.

TRANSACTIONS OF

THE ILLINOIS SOCIETY FOR CHILD-STUDY

VOL. II. — NO. 2.

EDITED BY
C. C. VAN LIEW
Secretary of the Society

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The PRESIDENT and the SECRETARY-TREASURER.

REPORT OF SECRETARY AND TREASURER.

The third annual Congress of the Illinois Society for Child-Study was opened at the Cook County Normal School, Englewood, Ill., at 3 P.M., May 13, 1896, by Charles J. Kroh, Director of Physical Training in the Cook County Normal School, who entertained the early arriving delegates with illustrative exercises in physical training. No more fitting inaugural to the Child-Study Congress could have been planned than was had in the physical training lessons of Wednesday afternoon, participated in by several grades of the practice school and by about one hundred members of the professional training class of the Cook County Normal School. Certainly nowhere and at no time can the characteristic traits and tendencies of children be studied to better advantage than during the gymnastic lessons in the gymnasium or on the playground

The lessons consisted of the regular order of exercises, and comprised free standing movements, running exercises, tactics, jumping, mass exercise on apparatus, light gymnastics with hand apparatus, re-formation and apparatus work. They were executed in ten sections, under the leadership of student teachers, the whole closing with a game played in six groups, illustrating development and adaptation to the different grades.

It was to be deplored that the majority of delegates to the Congress had reckoned from the formal opening announced for the evening, thereby missing a feature of the program interesting and instructive in all its details. The large audience of Englewood residents, however, which had turned out to greet the delegates, was, as usual, in its place, and no doubt appreciated the change in the program whereby the discussion

which was intended to be a feature of the program was omitted.

The first session of the Congress was opened Wednesday evening at 8 o'clock in the Assembly Hall of the Normal School, by the President, Col. F. W. Parker. He introduced Hon. Albert G. Lane, Superintendent of the Chicago schools, who delivered an address of welcome. He was followed by Dr. John Dewey, head of the department of Philosophy of the University of Chicago, who delivered a lecture on the Interpretation Side of Child-Study, which appears in this number of the Transactions. The exercises of the evening closed with a few remarks upon the significance of the occasion and the work of the Illinois Society, by Dr. W. O. Krohn, Professor of Psychology in the University of Illinois.

The following morning from 8 to 9 was occupied in the testing and examination of children by experts. At 9 o'clock the second session of the Congress was called to order by the President, Col. F. W. Parker, who introduced the following speakers to report upon the work of Child-Study in other states than Illinois: Hon. Charles R. Skinner, State Superintendent of Public Instruction, New York; M. V. O'Shea, Professor of Psychology, University of Buffalo; and Prof. C. H. Thurber, now dean of Morgan Park Academy, all reported upon the progress of the work in New York State. Superintendent Skinner's theme was the place of Child-Study in a State System of schools. Hon. H. R. Pattengill, State Superintendent of Public Instruction, Michigan; Dr. Putman, Professor of Psychology in the Ypsilanti Normal School, and Miss Ada Van Stone Harris, of the Ypsilanti Normal School, reported concerning the work in Michigan. Prof. Louis H. Galbreath and Prof. E. A. Kirkpatrick reported concerning the work in Minnesota. Misses Mary E. Nicholson and N. Cropsy, of Indianapolis, and W. C. Billman, Superintendent of Schools of Hammond, Ind., gave brief reports concerning Indiana. In addition to these the Association was favored with a few words from Miss Howe, a teacher of Kobe, Japan, and from Mrs. Hunt of Lucknow, India. Five of those who were expected to appear on this program were unable to be present, viz., C. O. Hoyt, Superintendent of Schools, Lansing, Mich.;

W. L. Bryan, University of Indiana; Joseph Jastrow, of the University of Wisconsin; Prof. G. W. A. Luckey, of the University of Nebraska, and Dr. F. Tracy, of Ontario. The words of most of those who took part appear in these Transactions. We have been unable to secure full reports from Professor O'Shea and Superintendent Pattengill. In place of the words which we should have heard from Superintendent Hoyt, we have substituted a paper which he prepared some time ago for the Society. Prof. Luckey sent a letter and Dr. Tracy and Supt. Hoyt articles which are published herewith.

Thursday afternoon the second session of the Congress was held in Kent Hall, in the University of Chicago. Dr. John Dewey presided. The meeting was called to order at 2:30 and the following program presented:

"Investigations in Pubescence" ..... *Albert H. Yoder.*
"Study of Children's Reading: Report of Work and Suggestions" ..... *Herman C. Henderson.*
"Suggestions for Work which can be done by Teachers" ..... *Frederick Eby.*
"Some Results of Laboratory Methods as Applied in the University Primary School" ..... *Frederick W. Smedley.*
"The Debt of Art to Childhood" ..... *C. P. Colgrove.*

The closing paper was illustrated as to the art of music by the following instrumental and vocal selections under the direction of Dr. Wardner Williams, of the University of Chicago:

(*a*) Bercuese ..... *MacDonald.* (*b*) Waltz—c mol ..... *Chopin.* Encore—Albumblatt ..... *MacDonald.*	*Wilbur MacDonald.*
1. Slumber Song ..... *Edgar Newcomb.* Words by Arthur Macy. 2. Cradle Song ..... *Kate Vannah.* Words by Eben E. Rexford. 3. "When I'm Big I'll be a Soldier". *Molloy.* Words by Molloy.	*Mrs. Louise Brehany.*

All of the papers presented during this session appear in these Transactions with the exception of Mr. Henderson's and Mr. Eby's.

The fourth session of the Congress was called to order in the Cook County Normal School, Thursday evening at 8 o'clock, by Vice-President Orville T. Bright. In behalf of the teachers of Cook County, Superintendent Bright extended to the Society hearty words of welcome and then introduced the first speaker of the evening, Dr. Joseph Jastrow, who spoke on the Statistical Study of Mental Development. The report of his address is contained in these Transactions. Drs. W. L. Bryan and W. O. Krohn were unable to be present on this occasion, but the audience was recompensed by a brief extemporaneous address from Dr. W. S. Christopher, of the College of Physicians and Surgeons, of Chicago.

Friday morning, May 15, the hour from 8 to 9 was occupied by the testing and examining of children by Dr. Jastrow, Dr. Krohn, Dr. Albert H. Gray and Frederick Smedley. At 9 o'clock the delegates assembled on the campus to witness an illustration of physical training through plays and games under the direction of Charles J. Kroh, Cook County Normal School.

Friday proved an ideal day for play day. Instead of marching to the chapel for regular morning exercises, and to recitations, the pupils and student teachers, some six or seven hundred in number, marched out doors in regular order, each grade in turn forming a semi-circle, one behind the other, with the training class in the rear, in front of the new gymnastic structure made by the pupils of the upper grades under the direction of Mr. Carley, Master of Sloyd. Mr. Kroh, head of the Department of Physical Training, mounted the structure and gave directions for the play hour, apportioning teachers to groups, consisting of from twelve to twenty players each. Each grade was divided into two or three groups, boys and girls forming separate groups. The plays and games announced were familiar to teachers as well as pupils, being part of the regular work—work in the garb of pleasure—practiced in the gymnasium during the year.

But ten minutes were occupied in giving directions, when the command to march was given, and the children marched in perfect order, singing and clapping hands to accompany the rhythm of stepping. The play ground selected was in front

of Students' Hall. The order consisted of ten minutes for free standing movements, thirty minutes' play or gymnastic games, reassembling at starting point, and school songs.

All the delegates present to the number of from one thousand to fifteen hundred looked upon the interesting and inspiring scene enacted upon the lawn. Each group had its choice as to order of formation, gymnastic lesson, game or play, ten groups of players, boys, being assigned to the south side, twelve groups of girls to the north side, and the student teachers to the center of the field. Each group of players had its own decoration, some having large rosettes, others very large hats or sun-downs, with colored ribbons, sashes, etc.

The conclusion heard again and again was that such play hours, if well regulated and orderly, are in the right direction and to be preferred to the usual plan of selecting teams of players who excel in a game or two, to the exclusion of the large body of children who ought to participate in the health-giving exercise so satisfactorily regulated by the adaptation and selection of games. The varying scenes were highly interesting to all who were present, and the children, as well as the visitors who thronged around the classes to hear the singing, were loath to leave the playground.

The following games were played on the field:

1. Three high. 2. Hand-ball. 3. Catch-ball. 4. Roll-ball. 5. Center-ball. 6. Link-chase. 7. Cross-tag. 8. Peel-away. 9. Sack-beetle game. 10. Sack-hurling games. 11. Cat and mouse. 12. Ruth and Jacob. 13. Last couple out. 14. Squat tag. 15. Stick wrestling. 16. Indian wrestling. 17. High jumping. 18. Broad jumping. 19. Tug-of-war.

At 10 o'clock the fifth session of the Congress was called to order by Col. F. W. Parker. The general theme of the morning session was Child-Study as seen in the Great Educational Reformers. The following program was presented. The addresses upon Froebel and Herbart appear in these transactions:

"Child-Study of Pestalozzi," Dr. John W. Cook, President Illinois State Normal University, Normal, Ill.

"Child-Study of Froebel," Miss Bertha Payne, Free Kindergarten Association, Chicago, Ill.

"Child-Study of Herbart," Dr. C. C. Van Liew, Professor of Pedagogy, Illinois State Normal University, Normal, Ill.

The sixth session of the Congress was called to order Friday afternoon at 2 o'clock by President Parker. The afternoon was devoted to the discussion of Child-Study work in Illinois and to general discussion. The Secretary, Dr. C. C. Van Liew, opened with a general report upon the condition of the Illinois Society and its needs. He was followed by Dr. C. A. McMurry. Reports were made by 6 of the 8 active round tables, as follows: For the Cook County Normal School Kindergarten Round Table, Miss Anne E. Allen, President; for the McCowen Oral School Round Table, Mary McCowen, President; for the Normal Park Round Table, Mrs. Ellen R. Jackman, President; for the Graham School Round Table, Principal W. E. Watt, President; for the Longwood Round Table, Mrs. Mary G. Young, President; for the Muttergarten Round Table, Mrs. W. S. Bates, President. Two round tables did not send delegates to report. These reports were followed by a general discussion. Among those taking part in the discussion were Miss Josephine C. Locke, supervisor of drawing in the Chicago schools, Mrs. Bassett, Rev. W. O. White, Pastor of the Universalist Church of Englewood, and President John W. Cook, of the Illinois State Normal University.

The seventh session of the Congress was called to order Friday evening, May 15, by Vice-President, John W. Cook, who introduced the speaker of the evening, Dr. G. Stanley Hall, President of Clark University, Worcester, Mass., who lectured on the "Methods, Status and Prospects of the Child-study of Today."

Saturday morning at 10 o'clock the Society met in the Arcade, Y. M. C. A. building, to listen to the second address by Dr. Hall on the "Love and Study of Nature in the School and Home." In the afternoon they met with the Women's Club at their rooms, 15 Washington street, Chicago, Ill., to listen to Dr. Hall's third lecture on "School Health and Hygiene of Special Studies and Methods."

From first to last the third Congress of the Illinois Society for Child-Study proved to be the most enthusiastic and suc-

cessful meeting of its kind that had ever been held in the world. All of the sessions were largely attended. A great many members of the Society were present at the sessions. In all about 1,500 different people must have been in attendance upon the meetings of the Congress. Dr. Hall's addresses, which were the main feature of the program, were eagerly and enthusiastically received, the audience room on each occasion being crowded to its fullest capacity. We have only to regret that but one of these addresses is permitted to appear in these Transactions. A large number of new members was added to the list of the membership of the Society.

On Friday afternoon also a brief business meeting was held and the report of the temporary committee on nominations was adopted. The old officers of the Society were re-elected, with but one exception, Dr. W. S. Christopher being substituted on the Executive Committee for Dr. Adolph Meyer, the latter having tendered his resignation. Since the Congress, Prof. L. H. Galbreath of the Illinois Normal University, and Prof. Colin Scott, have been appointed additional members of the Executive Committee.

At a meeting of the Executive Committee the following financial report for 1895–96 of the Secretary and Treasurer was presented and accepted:

RECEIPTS.

Balance cash on hand May 15, 1895	$206.17
Received memberships and charter fees	470.69
Publications	99.00
	$775.86

EXPENDITURES.

Printing and stationery	$87.81	
Apparatus	.65	
Postage, expressage, drayage, etc	153.05	
Publications	314.53	
Clerical work and legal fees	64.90	
Expenses of Society officers	9.10	
	$630.04	
Bal. cash on hand May 15, 1896	145.82	
	$775.86	

The above statement includes neither the receipts of the last Congress nor expenses incurred at that time.

The committee decided to leave the time of its meeting to a future conference. On motion it was decided that the next conference of the Society should be held at Chicago the coming year. It was also decided that, in order to secure the needed funds for carrying on the work of the Society, an assessment of 50 cents be made upon each of the members of the Society beside the membership fee, and that the payment of this assessment should be the condition for the receipt of future publications of the Society.

In closing this report the Secretary desires to state that the present status of the Society is most encourageing. The officers and executive committee are looking forward to the preparation of a program for a fourth congress in May, 1897, that shall equal if not excel the merits of the program of the third congress.

A brief syllabus will soon be issused to be forwarded to members of this Society, free upon application. It will contain brief suggestions from practical lines of Child-Study that are needed in the school room, together with directions as to apparatus, reading, etc.

The membership of the Society is constantly increasing and several new round tables have been added. The Society has enrolled thus far over 1,550 members and has issued charters to 15 round tables. The members are urgently requested to assist the Society to the full extent of their powers to increase the membership and secure the formation of round tables. There is no educational movement today that is doing so much to rationalize the treatment of the child as the subject of Child-Study, and there is no phase of this work that is so thoroughly practical and beneficial to anyone who is at all concerned in the education of the child as the round table work.

The present number of the Transactions is sent to all members who have paid the assessment of 50 cents.

C. C. VAN LIEW,
Secretary and Treasurer.

NORMAL,. ILL., *December, 1896.*

ADDRESS OF WELCOME.

ALBERT G. LANE.

CITY SUPERINTENDENT OF SCHOOLS, CHICAGO.

Under the heading of Child-Study, which has appeared in our educational journals during the last few years, we are taking up the consideration of questions that have interested a few for many years. Under the terms, Mental Philosophy, Mental Development, Psychology, investigations have been carried on in the higher ranges of work. It was reserved for those who introduced the Kindergarten work into this country to take the first steps in Child-Study proper. Kindergarten teachers and students have been concerned with the problem of the symmetrical unfolding of the powers of the child, and some of the best minds have been given to the consideration of this question from the Kindergarten standpoint.

We have much yet to learn. We find in our communities many minds that do not yield, that do not turn readily into the channels of development and unfolding that we have expected, and this has led us to investigate and inquire as to the conditions under which those children have lived and acted, in order to find out how they could best be reached, and how their powers should be trained. In all probability, ten per cent. of the children who come into our schools cannot be properly reached by the ordinary courses of instruction, and these individuals require individual attention, individual consideration. Defects, in many instances, are physical, and the observations that are being made are revealing the facts connected with physical deformities that have stood in the way of the growth and proper development of the child. These are questions of the utmost importance in the training of

youth, and under the new conditions which will come to exist we shall find that these special cases, determined by the expert who may investigate, must be placed under the care of specialists and experts to give them the special training which they may demand.

The result of these meetings throughout the country and of these investigations has been to awaken the teachers generally to the facts that have been submitted concerning these defects that have stood in the way of the child's development and normal growth.

Tonight the members of the Illinois Society for Child-Study resident in Chicago, and the teachers of this locality, extend greetings to the members that come from other sections of this State, and from other States of the West and Northwest, for there are representatives here of the whole Northwest. We welcome you to this conference for investigation, for reports of your investigations, and we expect that, as a result of this conference, there will be thrown about our work added light and new influences, and that we shall be better fitted to grapple with this great problem of the mental culture, physical culture, and moral culture, of the child.

We extend greetings, then, to all the members of this Illinois Society for Child-Study.

THE INTERPRETATION SIDE OF CHILD-STUDY.

DR. JOHN DEWEY.

UNIVERSITY OF CHICAGO.

In the succeeding sessions of this Society, you will have presented to you many of the more detailed methods and results of the investigations which are being carried on in child life in all its various phases. It seemed to me that it might be worth while, this evening, to raise a somewhat different aspect of the question, and not attempt to give you any of the methods by which experts are engaged in investigating children, any of the results in their pedagogical or psychological bearings which have grown out of the application of these methods, or any of the popular phases which are perhaps of equal, and in some respects superior, importance. It seems to me that it might be worth while to raise the question which lies back of such a congress as this, such a meeting as we have here tonight, back of all this enthusiasm, back of this enthusiastic study, search for methods and attempts to apply them.

What is the source of this interest in child life? What is the meaning of the fact that at the close of the century these investigations carried on here and there in more or less technical ways have gathered such momentum? Is it not significant that such a society could be organized, could create such an interest at large, and attract such a representative audience as is here tonight? How are we to interpret this new interest and this new kind of interest in the child? Where did it come from? What is it for? What may we expect of it? These are questions which I think any one who is curious about social phenomena must raise as he sees the wonderful growth of this Child-Study movement. It con-

fronts us as a fact, and it led me to inquire first out of curiosity, to see if I could formulate any reasons that would answer the questions. Such results as I have obtained for myself, I will endeavor to present to you this evening.

There are three great sources, or three great movements, in the development of interest in the child. These I term, respectively, political, æsthetic, and scientific.

The political interest in the child began to develop, that is, attention was directed to the child on this basis, in the time of Plato and Aristotle. There have always been educational systems where there have been people of any degree of social organization. There have always been precepts and rules regarding conduct and education. We find no people which have counted at all in the civilization of the world which have not gone beyond education in some way or other to formulate its rules. But there is a distinct difference between formulating the precepts for education, and consciously raising the question of what the end, the object, of education is, and, upon the basis of that end as a standard, attempting to formulate the methods and principles of educational work. That inquiry began, I repeat, with Plato and Aristotle. Of course, people have always observed children, given attention to them, have been interested in them. But again there is a great difference between mere recognition of the child, mere adaptation of one's self to the child, and the conscious reflection upon what the child means, what he stands for, and how that child is to be treated if he is to attain to that for which he stands. Once more, it was Plato and Aristotle who first consciously brought to light that point of interest in child life. The first source of conscious interest in the child was the position of the child as a factor in social organization. All these three interests of which I shall speak this evening, the practical or political, the æsthetic, and the scientific, came at times of great agitations of life—at times when old institutions were being transformed, when there was a conflict between civilizations and races previously separated, when life was in a ferment, and when it was necessary for persons to reflect upon the meaning of life and to attempt to settle for themselves some well-defined and established princi-

ples which would afford a basis for holding life together, for organizing it. The time of Plato and Aristotle was precisely such a period, a period of contact of the oriental and western civilizations; it was a period of the breaking down of the old religious faith. All bases of life, political, moral, and religious, were being questioned, and that led such men as Plato and Aristotle to question regarding the nature of life itself, whether it could be organized and what the principles were which made it capable of organization. It was that problem, the question of how, in the breaking down of the older traditions, older habits and older principles upon which life had been organized, through reflection and discussion to find a safe and sure standard upon which to proceed in reconstruction, reorganization, of society, which led to the interest in education. Plato's great treatise on education is also a treatise on metaphysics, ethics, principles of art, and so on. It is impossible to draw a line, saying, this part is metaphysical, another part political, and another part educational. He realized that all these questions were one. The philosophy dealt with the question of discovering the principles; the question of education was the question of applying these principles; the question of social organization was the question of the way in which society should be built up after the discovery and application of these principles; so *there* was a source of conscious interest in the child.

If social life is to be what it should be, if the state is once more to be organized, then the beginning must be with the child, and the shaping and directing—in short the conducting—of the child must be from the first consciously undertaken with a view of reaching this idea. Plato, in short, realized that the foundation in any established political organized life was the child and the shaping and directing of the life of the child through educational instruments from his birth up to his full emergence into civic life. There must always be some reason, however. People do not give attention to any subject, even such a subject as children, unless there is some urgent motive for it. The child was such a factor in the reorganization of society that he must receive *definite* attention. Not the child, however, *as* a child, not the child

in himself, but the child as a factor, as an instrument, as an element, in political organization, was what received attention at this time. Not, I repeat, the child in himself, but the child as an instrument, as a part of the social structure. There was a great advance here, because there was a systematic end in view, a training, an education, based on principles reflectively established and not on mere routine or tradition such as all the older types of education up to the time of Plato and Aristotle had represented. It was systematic in its end, systematic in its scope, systematic in its use of means, in the observation of children from this one point of view. Children must be trained and observed from the start to see what position in the social life-structure they are best adapted to fit into. This interest in the child and this interest in education as a means of shaping children for the social structure became imbued into civilization early; but medieval Christianity changed the form of interest because it changed the type of social ideal, of social structure, which was held in view. Education still had the same motive back of it, and attention to children was on the same basis, still aiming to direct the child for this fitting of himself into the ideal social structure in view.

In this movement, then, it was recognized that society is not the work either of chance or of fate, but that society is in some sense, a work of art. Not of art as distinct from nature, but of nature coming to consciousness in man, and through man's own nature assuming more perfect forms because having an end in view. The interest in education and in the child originated, then, because man recognized that social life was capable of intelligent direction. The first step in getting at this direction was to begin with the child and prepare him from the first for the type of social life held in view. As this was the first, so it is today still the deepest and best organized motive in popular consciousness both for education and for attention to the child. If it is asked, whether in a popular, or in a more technical way, what the justification of the public school system is, what the justification of the denominational religious type of education is, the answer, ninety-nine cases out of a hundred, will come back to us in this form—the child is to be a member of a certain form of social life, and he must

be trained from the start to make him a capable and efficient member of that social order, and that can be done only as we attend to him through these educational means. It takes shape in the statement that the supreme consideration controlling the whole curriculum of the school lies in the demands of the civilization into which the child is born. While this basis requires attention to the child, while it makes it necessary to think of him, while it makes it necessary to attend to him in a way which otherwise would have been impossible to attain, it cannot be said to be complete. The mere fact that he is not taken in himself, but as a type of society, is dangerous. It tends to rigidity, mechanism, arbitrary schemes. Many of the most routine features of the educational life of our children, both in the family and in the school, are due precisely to the fact that the child has been considered not as himself, but from the standpoint of the mere political organization into which he is to be fitted. If we have an end set up in advance for the child, if we make up our mind beforehand where and how he is to fit in, then once more we have the conditions of attending to the child for a definite end. We do not attend to these things for the mere luxury of attending; it is the end in view which will determine what we shall see. If we have in view a fixed end to which the child is to be adapted, the things in the child which relate to that end are the only things which we are capable of seeing. The child has always been with us. Child-Study may be a new thing; organizations for it may be new. He has been with us ever since humanity has been here. How are we to account for the fact that these most wonderful facts of child life have not been seen before? How are we to account for the fact that the scales on our eyes are only now beginning to fall off, unless we concede that we have not been seeing the child, we have not been observing him as he is, but simply seeing him from the standard of his relation to some goal which we set up in advance?

We can say of each of these typical movements of interest in child life, that its source came at times of great expansion, or even conflict, of traditions, habits, ideals—moral, religious, artistic—which have previously been distinct and separate. The

second of these great types came at the time of the Renaissance, at the time of the contact between medieval Christianity and the revival of Hellenic learning, when Europe began to be one socially, and not merely as a physical fact of geography. The great source of interest in the child which was born at that time was the æsthetic aspect. No longer was the child simply a necessary element in social life, and therefore to be shaped for that life, but he was looked upon as having a symbolic, an ideal and prophetic significance. The child was born again in the painting of this period. Else why all this interest in the Holy Family, this interest in child life and mother life, and the centering not only of religious energy, but practically of the whole tendency of art, itself, upon the child? I take it that the child was recognized now as having this prophetic value; the child life was recognized as somehow pointing forward not simply to some particular form of social life, but rather as a dream of some social life which as yet they could not formulate, which lay either too far beyond or too far behind. The child was taken as a prophetic type of the ideal fate of the unrealized social order, and then got the religious and æsthetic value. The interest on one hand was retrospective. In looking at childhood, men seemed to see their own lost innocence, lost promises, that which they might have been and once promised to be, had given an earnest of being but failed in becoming. In looking at the child, and those things which center about the thought and life of the child, humanity thought to escape the limitations which it felt pressing upon it; as if men had said, "we cannot be what we want to be, we are filled with limitations; but in the child we see the freedom, the spontaneity, the ideal, which with us has become so dim, so wretched."

The interest was not only retrospective, but was also perspective; not merely looking back to a lost estate, but truly seeing if we once have been this that our children are now, then under some conditions humanity may be that again. In the domain of faith, the child is evidence of things not seen. He is moving in and towards the world yet unrealized. In the Sistine Madonna we certainly have these values; this consciousness of looking backward and forward is summed up

in motherhood and childhood, the germinating forces, the forces which make for continuity, for openness, and for movement.

Now here again there is a distinct advance from that earlier type of interest which took the child from the standpoint of his use in some social order. The child is still conceived of as a member of the social order, but the order is not fixed but moving; he is not so much to be fitted into it as he gives a clue to it, what it should be, and what it may become. The difficulty was that the gulf after all between the real, the actual, limitations of life, and the ideal set up, remained, so that the interest tended to become sentimental, or the source of what afterwards in literature became romantic. The position of the child as ushering in a new and better life is taken to satisfy the emotions of the adult rather than as a stimulus to action on the part of adult. The child is taken as affording consolation, as a relief from the ideal, for the adult, and there is no easier or cheaper way of deceiving ourselves than by setting up something as an ideal in order to free ourselves from the responsibility of realizing it. The child is a symbol to an adult, rather than a fact himself, a symbol of unfulfilled hope of his own nature, a symbol of what an adult wanted to be, what he would be if he could, rather than a sign of what the child himself should be, and what all the forces should be directed to make him. So at best this lifts itself to the motive of art in all its forms, and it does help humanity to find its ideal; but, at the worst, the child becomes the plaything of the adult, still under the name of being his ideal—something to make home pleasant. Gradually the evil tendencies of the interest which has its source in the æsthetic point of view, tend to reinforce, or rather correct, the other; each emphasizes and sets the other off. The school only too often stands for the mechanical routine side, while the home stands for the child as a plaything, a symbol, something to make life more agreeable, more happy for the adult.

The third source and type of interest has been the scientific movement of our present century. This interest also comes at the time of expansion, the new development of life;

it comes when old habits and traditions—physical, national, social, industrial, moral and religious—are breaking down; when the world, and not simply one part of the world, is being made one. This scientific interest focused itself upon the child as a phase of the general interest in growth in the beginning of things, therefore as a factor in growth, and as a key to the nature of growth. The great sciences of the present century have been the historical and social sciences, taken from a historical point of view. The great scientific work, proper, of the century is summed up in the term "evolution," again the movement, growth, from the simple beginning.

While this is generally recognized, we often overlook the fact of the accidental way in which this historical interest grew out of the interest I have just referred to—the æsthetic. The historical interest in science and philosophy of the present century were born of the German romanticism of the last century. The ideal of the literary and artistic romanticists of the eighteenth century was a return to nature, to the childhood of the race. The childhood of humanity, if not of the individual, was idealized; it was made the source and expression of everything that was free, beautiful, ideal, spontaneous. Whether we find it in cruder forms in Rousseau or in more refined classic forms in Schiller, there is still the same idea that somehow there is a lost Garden of Eden, that the early history of the race was a time of poetry, a time of imagination and fancy, and now we are simply in the clutches of hard, unrelenting, real prose. This was the time to escape these conditions, to get back to poetic conditions. Out of that romantic ideal of the return to childhood of humanity and the return to primitive conditions, to nature, developed, not simply as a matter of theory, but as a matter of demonstrable fact, the interest in history as such, that new born interest which marks the present century, which does not see its interest limited to what is about it at present, but realizes that the whole past is, with the present, an organic part of human life and progress. In this return we have the idea that the primitive is the unspoiled.

This scientific interest, as all such movements, has moved from the mass to the particular, from the bulk to the parts

which are contained in it, from the race to the individual, from the childhood of humanity to the childhood of the individual. Psychology, baffled, working on a purely formal basis, betakes itself to the beginnings, to the germs.

Now the question which meets us is, what is the relation between these three movements? What is the relation of the last movement to the two others spoken of, the practical or political interest, and the æsthetic? Is it simply a third interest added upon the other two, or is it a substitute for the other two? Does it possibly reinforce, correct and vivify the other two? A distinguished psychologist has made an argument, within a year or two, to the effect that there is an opposition between science and personality; that the question of personality is a question of nature, that science takes not natures but objects, and therefore the attempt to have a scientific study of children means that we are losing the social and sentimental interest, that we are losing our spontaneous sympathy in a large measure, and reducing the child to an object to be looked at, poked at and felt of. What are we to say of this? Is it true that it reduces the child from a living being to an object, and therefore reduces our interest in the child from the vital, sympathetic, to the curious? Science certainly does make us view the child as an object, but that does not settle the question; it still remains. As what kind of an object does the child present himself to our investigation? The question is not, what may a given scientific man do, but what does the scientific attitude itself demand and require? Does the scientific point of view destroy, pervert and suppress the intrinsic significance of object study? Or does it do that only in so far as it fails to be scientific? In other words, when we substitute the universal point of view of science for our own prejudices, do we reduce the child from a person to a thing, or do we see him for the first time more truly as a person? Take the scientific question in relation to the æsthetic. Is not the question simply this, are we to take the child as he is in himself, or as an expansion of our ideals? Are science and sympathy antithetical? Certainly there is no discovery, no observation, no profound explanation in the way of theories where there is not close and con-

tinuous attention? To what shall we give our best attention? The personal and æsthetic interest is the crowning motive for scientific study. The return to nature, in other words, must be literal and not sentimental. We ought to go to the little child, in fact. The symbolism of the child must be taken as genuine, as intrinsic, as having meaning for the child himself and not simply for us. Science, in a word, gives us a basis for transforming the emotional idealism which has clustered about the child into practical idealism and working forces.

Just a word about the relation of the scientific to the political. Do we have here again opposition or superimposition of one interest upon another? Again, I think we have the most fruitful inter-action. Is it not social interest which gives to the scientific interest its motive? As long as social life was comparatively stable, as long as it was fixed in narrow groups, based upon tradition, it was not relatively, from a practical standpoint, a matter of much importance that the child was taken in a comparatively fixed way. But now the whole world is practically one because of increased range, containing side by side all kinds of types, and we do not and cannot know what a child's life will be either industrially or in its social quality. To attempt to educate him means to educate him for the present, and then when the future comes upon him leave him either stranded or wrecked. The only way to educate him for the flexible future is to give him the utmost command of himself and of the methods of civilization. Only, in other words, by giving the child command of himself now, and by giving him command of that self through the command of the fullest, most complete existing tools by which civilization makes progress, can we prepare the child for his future place, his future work.

What is the relation of this to the question in hand? The scientific type to the practical type? Simply this: We cannot, whether we approve the fact or regret it, educate the child for special membership on the basis of habit, routine, or tradition. The society for which the child, to-day, is to be educated, is too complex, makes too many demands upon personality to be capable of being based upon custom and routine without the utmost disaster. We must educate him by

giving him the widest powers and most complete tools of civilization. Only a study, only the knowledge, of what those powers are and how to master them, and what would instrumentally aid or hinder in their development, and how, is in any way adequate to this task.

For the practical interest, as we have said of the æsthetic, the scientific type is not a substitute; neither, again, is it superimposed upon the other two. It is these other interests which set the problem, which furnish the end, which make the demand for science, and it is science and science alone which can respond to these demands and can solve the problems which the emotional idealistic interest and practical or political interest made. The extension of science to the child means that he has embodied in his own structure, laws. That great saying, "Come, then, let us live with our children," means all these things; it means the co-operation and mutual interaction and reinforcement of these types of interest.

PLACE OF CHILD-STUDY IN A STATE SYSTEM OF SCHOOLS.

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One of the pleasantest privileges of official position is the power to do what one believes to be right. If coupled with that is the ambition to do right, it is a double pleasure. To be a source of encouragement to those who are seeking to uplift the cause of education, whether it be in the nursery or in the university, is a great privilege. My first inspiration toward Child-Study came to me among my own children. My second inspiration came from listening to the addresses at the principal educational associations of this country. Underlying all those discussions and great papers on education, was this spirit which actuated men and women to read the child as an open book, to study children's works and children's ways. My third inspiration came from Prof. Thurber, now of the University of Chicago, who outlined a plan upon which I immediately set to work in New York state, so far as my power and my authority permitted. The work was placed in charge of Mr. Thurber, and I had expected that he would be present and tell you something of the details of that work. As soon as possible, circulars of information and blanks were supplied, and through our teachers' institutes in the state of New York, which I regard as among our most valuable educational agencies, under the direction of Mr. Thurber and Miss Eggleston, the subject of Child-Study was presented as a new theme to the teachers in attendance upon these institutes. The institutes for the spring of '95 closed in June, and several thousand papers were presented, classified and arranged by Mr. Thurber and his assistants, and they will form

part of the forthcoming report from our department, which a is now in the hands of the printer, nearly finished.

I have been asked to say something concerning the place of Child-Study in a state school system. Every well-considered state school system will give its attention to all influences which tend to the welfare of the individual as well as the state. The place of Child-Study in such a system must depend upon its importance, and its importance will depend upon the interest of those whose privilege it is to walk in the paths of education; therefore, the place of Child-Study in a state school system depends fundamentally upon the interest of the teachers and of the parents in little children. If we magnify that interest, Child-Study will force its way into every well-arranged state school system. It will not only force its way there, but it will hold its place. The nearer we get to the child, the nearer we get to the foundations of education, the nearer we will come to know that children have some rights that great states are bound to respect. In all places for professional instruction of teachers we should consider every phase of work which bears upon correct knowledge of child-life. In our teachers' institutes, in teachers' training classes, in our normal colleges and normal schools, where we aim to teach teachers, we can do no grander work than to train their eyes to see the realities and the possibilities of childhood. This is a work which the state can do, and which, with its mighty opportunities, it should do.

Child-Study establishes, what is greatly to be desired, a closer relationship between the teacher and the child. The foundation of that relationship is love, sympathy, encouragement, and appreciation. It establishes a closer relationship, also, between the teacher and the parents of the children; and no teacher, I believe, can do full justice to the child until he knows exactly what kind of a home that child comes from. He should know exactly what kind of fathers and mothers his pupils have, what kind of a home they come from in the morning, and to what kind of a place they are going when they leave his presence; what kind of a table they will surround at night, what influences are in and around that home.

There is a common saying that the American boy is a barbarian. I do not believe it; but if there is the slighest foundation for that saying, then we need a mighty impulse to bring about a contrary state of things. Our schools and our homes are reciprocal in every respect, and I would make our school-houses, every one of them, as pleasant as the pleasantest home from which our children come. (Applause). I have often said that if the millions, if the thousands of millions which are spent every year in this country for liquor and tobacco taxation without complaint, could be spent upon our schools in place of the one hundred and fifty millions which they now cost, we could have brown stone front school-houses in every district in this country, and, I have sometimes said, we could have brown stone front school teachers also. [Laughter].

If the state would know the man, if it would know the individual, then it certainly should pay attention to the child, who makes the individual. As a good builder will always watch the character of his foundation, so every school system, whether it is local or state, should watch and guard the foundation upon which the system is built. Child-Study is entitled to a place wherever a child can go. In so far as a state system recognizes children, it should recognize childhood and every influence which can uplift it. Every student of literature must, some time, have read his primary reader; so every student of a man must some time have studied the child.

What is the State? "The State is the whole body of people who are united under one government whatever may be the form of government."—(*Webster.*) The original bond of union and the original sanction for magisterial authority were one and the same thing, namely, real or feigned blood relationships. In other words, families were the primitive States. The original State was a family. Historically the State of today may be regarded as in an important sense only an enlarged family: "State" is "Family" writ large.—(*W. Wilson.*) "The State is the politically organized people of a particular land."—(*Bluntschli.*) States were the basis of primitive society; the individual counted for nothing; society, the family, the tribe counted for everything. Government

came, so to say, before the individual. Aristotle was simply stating a fact when he said, "Man is a political animal."

The Family and the State. "It is the proper object of the family to mould the individual, to form him in the period of immaturity in the practice of morality and obedience. This period of subordination over, he is called out into an independent, self-directive activity. The ties of family affection still bind him, but they bind him with silken not with iron bands. He has left his "minority" and reached his "majority." It is the proper object of the state to give leave to his individuality in order that that individuality may add its quota of variety to the sum of national activity."—(*W. Wilson.*)

The State and Education. "In one field the state would seem at first sight to usurp the family function, the field, namely, of education. But such is not in reality the case. Education is the proper office of the state for two reasons.

Popular education is necessary for the preservation of those conditions of freedom, political and social, which are indispensable to free individual development. And, in the second place, no instrumentality less universal in its power and authority than government can secure popular education. In brief, in order to secure popular education the action of society as a whole is necessary; and popular education is indispensable to that equalization of the conditions of personal development which we have taken to be the proper object of society. Without popular education, moreover, no government that rests upon popular action can long endure; the people must be schooled in the knowledge, and, if possible, in the virtues upon which the maintenance and success of free institutions depend. No free government can last in health if it lose hold of the traditions of its history, and in the public schools these traditions may be, and should be, sedulously preserved and carefully replanted in the thought and consciousness of each successive generation."—(*W. Wilson.*)

What is Child Training? Manifestly, child training is a part of the education of a people, with many counted as an inferior, secondary part, with the wise and thoughtful regarded

as the most important of all. Child training has to do with the development of the germs of knowledge. To neglect the cultivation of a plant till it has reached half its growth is to neglect it at the very time when cultivation can do the most to develop its strength and promote its fruitfulness. Child training has to do with the formative season of the activities, physical, mental, and moral, of the future men and women of the race. To leave children without care, to suffer them to grow as the weeds grow by the wayside is to make sure that much time must hereafter be spent in bringing those activities into true harmony with the highest aims of life, if, indeed, they can be brought there at all.

The *Individual* suffers by such neglect, not only negatively by the absence of needed qualities tending to what is noblest and highest in character and life, but positively in the growth of opposite traits which debase and degrade. If the child life of everyone could have been nurtured according to the dictates of the wisest reason, the soundest philosophy and the purest morality, would the wretched experiences of multitudes, now shattered wrecks along the sands of time, be known?

Society suffers from the neglect of child training. Society is the aggregate of individual experiences in the direction of combined family joys and sorrows, successes and failures, victories and defeats. If the mass of individuals fail to realize the highest aim of life, if, through early neglect, habits, customs, fashions have been woven about the different individuals, where is the power to separate their experiences and bring into society the new elements working toward nobler ends and reaching higher planes of thought and action?

The *Community* suffers by this neglect. Where the individual and the component parts making up society are infected by the same organic taint, can the community escape? Will not the experience of the different members come to be that of the entire body? Can the foot be lamed, or the hand withered, or the eye blinded, or the ear closed, or the smell destroyed, or the taste perverted without the whole organism suffering in the loss the afflicted member sustains? Does not this hold true everywhere? Is not this law as valid in the

mental and moral world as it is in the physical? Is a paralytic, or a blind, or a deaf, or a deformed person, any more out of harmony, with what is beautiful and true and good, than one blinded by ignorance, or deaf to reason, or warped by prejudice? Is it not a loss to the community when the moral sense of its members allows violation of those immutable laws written just as surely upon the tables of man's nature as upon the tables of stone given to Moses on Sinai?

The *State* suffers also by neglect of Child Training. The state is made up of communities. If these grow to beautiful harmony and completeness the State becomes beautiful, strong, enduring, If communities are awry through ignorance, prejudice, evil doing, can the state be otherwise than like its component parts? Has any law been found whereby combining evil elements produces virtuous compounds? If individuals and society in the multiplied communities making up the body politic called the state are actuated by low, unworthy, sordid motives will the state by the mere fact of the *aggregation* of such communities become noble, exalted, magnanimous in its objects and achievements? Let history tell the results of just such combinations and prove that it is only as the majority are characterized by grand, lofty and inspiring motives that the state becomes imbued with these qualities and reflects the grandeur of dignified and uplifting principles.

It has been practically settled by the constitutional authorities of the state and of the nation, that self-preservation is the first duty of the state to itself and its citizens. It has also been practically settled that self-preservation for the state under the republican form of government can be secured and perpetuated only by securing for each and for all the best education possible. It has come to be the law in many parts of the land that education *must* be furnished by the state; that in furtherance of the object of its existence, the state has the right to compel the attendance of children in the public school; that neither the greed of niggardly parents, nor the avarice of soulless corporations shall stand between the state and the education of its children; that up to a certain point the children are under the tutelage and protection of the

state, and, as its wards, have inalienable and indefeasible rights to such an education as shall properly fit them to be citizens, able to comprehend the laws, and willing to aid in their enforcement.

More and more, education for citizenship stands out as the aim of the state for every child within its borders. To make an active, earnest, enthusiastic, loyal supporter of the government, educated to appreciate the blessings enjoyed and eager to transmit them in turn to others, that is the purpose of the state in the education of the young.

If the positive advancement of the peace, wealth, and the intellectual and moral development of its members are objects which the government, as the representative of the corporate authority of society, may justly strive after, in fulfillment of its end, the good of mankind, then it is clear that the government may undertake to educate the people. For Education promotes peace by teaching men the realities of life and the obligations which are involved in the very existence of society; it promotes intellectual development, not only by training the individual intellect, but by sifting out from the masses of ordinary and inferior capacities those which are competent to increase the general welfare by occupying higher positions; and, lastly, it promotes morality and refinement by teaching men to discipline themselves, and by leading them to see that the highest, as it is the only permanent, content is to be obtained not by grovelling in the rank and steaming valleys of sense, but by continual striving toward those high peaks, where, resting in eternal calm, reason discerns the undefined but bright ideal of the highest good, a cloud by day, a pillar of fire by night."—(*Huxley.*)

If therefore the position taken is correct, that compulsory education of children is the right of the state, then it must follow that the state has also right to say when and how this compulsory education of children shall begin. It is as much the duty of the state to provide for Child Training as it is the duty of the state to provide education in geography or arithmetic, or history or language. Indeed it will be more the duty of the state to provide such training, for the state cannot afford to allow children to grow up for four, or five, or six

years without proper instruction, so that they come into the schools with habits formed which must in many instances be changed altogether, which in many more are defective and prejudicial to the proper development of the child's mental powers. If compulsory laws in the state can lay hold of truants at 10, 12 or 15 years of age and compel their attendance at school, has not the state a right to say also to parents, "See that your children are trained at an age sufficiently early to prevent their becoming truants." The state has as absolute a right to protect itself from the evils of children growing up in ignorance as it has to protect itself from the spread of contagious diseases.

Children, high or low, rich or poor, are the wards of the state. The state must protect and educate its wards and must provide for them the opportunity to become good citizens. In doing this it must take the children at the most impressionable age. It must insist that teachers be specially trained for the study and teaching of little children; that in the formative years when habits of study which will accompany them through life are being acquired these habits shall be the best; that while the mental and moral characteristics are taking shape they shall be moulded rightly, purely and nobly; that teachers shall regard little children as did the Master Teacher of the ages, and feel as He taught, "Of such is the kingdom of Heaven."

Here it seems proper to consider with some detail the questions: What is Child-Study? and, in view of the foregoing discussion, What connection may it claim with a state school system?

What is Child-Study? Perhaps in view of certain current though shallow criticisms it may be well to state first of all what it is *not*. It is *not* a fad nor a chimera; it is *not* a sentimental abstraction; it is *not* an impracticable theory. On the contrary, it is a well-grounded plan of work; it is a thoroughly scientific development; it is an intensely practical method.

How is this work to be undertaken? In a word, wisely, patiently, lovingly, constantly. "It should be the aim of every teacher to get into close contact with the pupil's mind,

and, daily, for a short time, at least, to induce and direct its activity when it is free from the worry and excitement of learning and reciting a lesson. The teacher who would make the training of her pupils' minds and hearts the prime factor in her work must be possessed of a sincere love for it. Her whole mind and soul and spirit must be absorbed in the development of the highest possibilities in the minds and characters of her scholars while they are under her charge." —(*Aitken.*)

"May the time soon come when only those whose minds and hearts have been thoroughly trained for the work shall be called to train and to teach the youth of our country, and may the call to teach come from the heart of the teacher, and not alone for the sake of heaping up riches."

"To be a good teacher, in the nobler sense, demands self sacrifice and loving interest in pupils who need such help and encouragement as they could not receive but for the teacher's liberality."

When does this work begin, and how long does it continue? With the mother in the home; with the conductor in the kindergarten; with the teacher in the elementary school; with the principals and professors through all stages of secondary instruction. "American teachers are slowly realizing that the only philosophic and even rational and consistent education is ultimately based solely on a knowledge of the growth of the body, brain, and soul of the young of the human species."—(*G. S. Hall.*)

"You must keep holy the being of the little child." Protect it from every rough and rude impression, every touch of the vulgar; a touch, a look, a sound, is often sufficient to produce savage wounds. A child's soul is often more tender and valuable than the finest or tenderest plant. That so slight a thing as the gentle folding of the hands, with an external quietness, impresses the little soul with an inner feeling of collected force and unity, which is the germ of that great and strong religious conviction which leads to speak of God as the "Life in whom we live and move, and have our being." —(*Froebel.*)

"*By the good things the mother thinks,* she can bind her

child to good by many links." The good thoughts within her breast tell themselves unconsciously through her bodily gestures and expressions of face, impressing silently the child's heart. It is this *sense* of reverence which the child needs more than the dogmatic *teaching* at this early period of life. Oh, mother! does not the thought that your real inner life inevitably tells upon that of your child, rouse in you the desire to live the highest, noblest spiritual life of which you are capable? And why not the *father*, as truly?

Let the mother once teach her child to see the difference between the great and little things of life; and she has placed him where no outside storms can disturb his serenity, where no sickness, nor poverty, nor lack of success, nor lack of popularity can give him one inward pang. He is master of his own life. The petty aims of shallow people do not divert him from his great purpose. The world exclaims: "Truly a great soul! Let us draw near and gain strength from it!"

Why should Child-Study be encouraged? To the question four categorical answers can be given, based on the argument found in the earlier part of this paper:

1. Because of its importance to the individual. 2. Because of its value to the community. 3. Because of its advantages to society. 4. Because of its necessity to the state.

The state must come more and more to stand in educational interests for whatever is truly progressive and enduring. It must, through its recognized authorities, *not* be content with looking backward and noting improvements made. It must stand on the watch-tower alert for every token of advance to catch every sign of proficiency, to welcome every true reform. Much has been learned in the fifty years past respecting the obligation of the state for the education of its children, and its authority to compel parents to do their duty for their offspring, but much remains to be learned respecting the co-ordinate obligations of parents, teachers and the state to make education realize its noblest possibilities.

Prejudices must be removed from the minds of parents and teachers alike. Mutual helpfulness and community of interests must take the place of suspicious coldness and careless indifference. As the new work comes to be more carefully

studied, more perfectly systematized, more thoroughly practiced, it will adjust itself more easily to the phases of thought and the needs of the times, and create for itself demands now undreamed of. Science moves forward with elastic step and beaming face, each day marking new triumphs in the physical world. Shall not science in this richer and nobler study of man's mental and moral nature find new cause of gladness and move with alert face and flashing eye and radiant countenance to solve these grander problems of thought and will?

The state will do what it can in the future to bring itself into closer relationship with Child Training, but it must never be forgotten that there are limitations to its powers, limitations arising from the constitution of the human mind, from the complex nature of human society, from the difficulty of making complete adjustments of diverse human interests. Misunderstanding will have its part to play, obstinacy will do its share, jealousy interpose its difficulties. Time must needs be taken to do the work required. Patience must wait slow moving forces. Skill must watch every point in danger. Courage must challenge the stoutest foes. Tact, cool and deliberate, will keep guard at the gate of progress till at last limitations will be changed to opportunities and the beginning of the end shall come. Teachers will be raised up like Pestalozzi and Froebel, and Comenius, whose enthusiasm and genius and far-seeing perceptions will make the way clear to sympathizing workers, and a new sky will brighten the coming century. Yet it must always be remembered that each advance only reveals new realms beyond. Problems solved today leave others still for tomorrow. The greatest limitation will always remain, the inability of man to grasp the infinite and the eternal lying beyond and above him in every educational advance.

What is possible in the training of the race has never yet been dreamed by man. Study the history of education and you see that its development proceeded not in the lines of pre-conceived opinion, but according to the experience of actual endeavor. To meet immediate necessity, paths unthought of presented themselves. Ardent and aspiring seekers after truth caught sight of paths hidden for ages from

other eyes. So in the centuries beckoning man to new enterprise and new achievement, combinations long considered impossible, adjustments that seemed chimerical only, conjunctions occurring only in long centuries will bring forces into play before which all obstacles will disappear as the dew of the morning.

Faithful men, devoted women, earnest and loving teachers who see eye to eye with parents whose aroused intelligence will eagerly second each effort for children whom the state will regard as Cornelia did hers of old, and say with greater pride than did that Roman matron, "*These are my jewels.*"

UNIVERSITY OF BUFFALO.

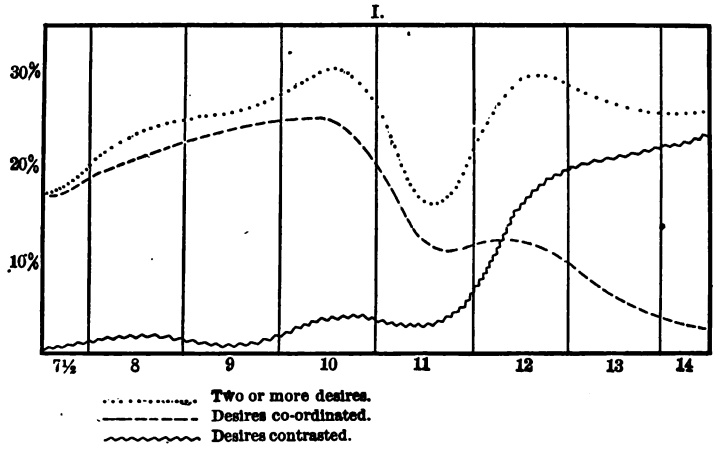
PROF. M. V. O'SHEA.

Prof. O'Shea gave a summary of the lines of work pursued in the University of Buffalo. (A somewhat more complete statement of this work will be found in Vol. 2, No. 1, of the Transactions of the Society). One of the most important studies that has been carried on at the University of Buffalo is that of the interests of children. Readers of the Child-Study Monthly are familiar with Prof. O'Shea's work in this line. There has also been much work in the study of individual children. As seems to have been the case everywhere, this study of individual children has been followed by a better understanding between teachers and pupils. At the Buffalo school the coming year Prof. O'Shea says there will be a course adapted to high-school pupils, and in due time it shall be carried into the college. Buffalo has two mothers' clubs which were organized with the hope that the mothers might be interested in original investigation, but so far the interest seems to be much greater in the study of results already attained. Prof. O'Shea also made some reference to the important work carried on by the Associated Alumnæ of the Normal College, New York City, in the study of child-nature.

WHAT CHILDREN WANT TO DO WHEN THEY ARE MEN AND WOMEN.

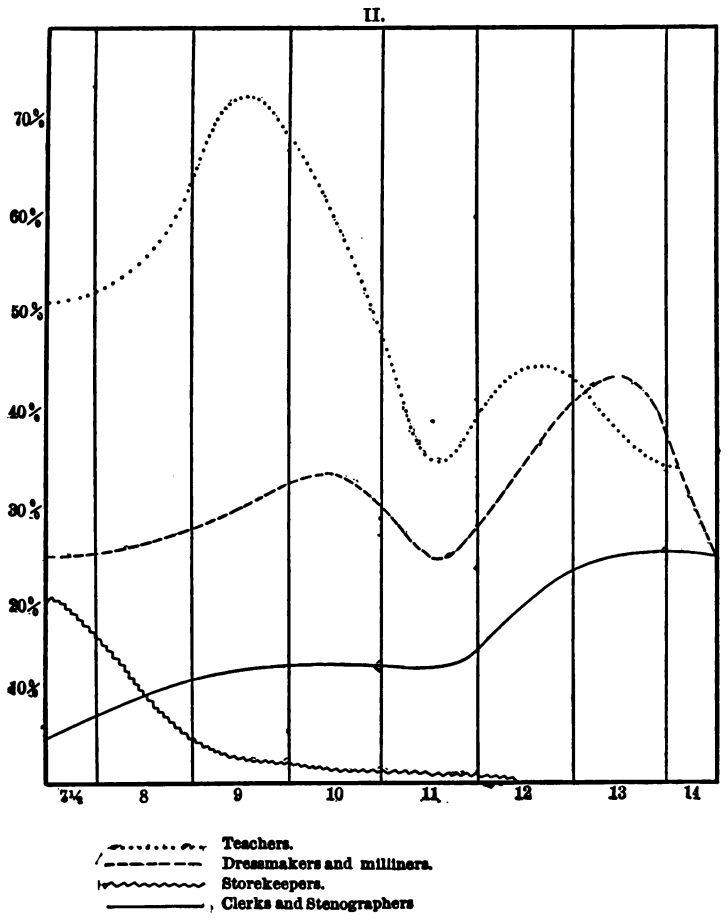
PROF. CHARLES H. THURBER.

A little over a year ago the Division of Child-Study was organized in the Department of Public Instruction of the State of New York. It was recognized from the first that it was important to suggest some work which would be interest-



ing and could be easily carried out, in order that the sympathy of many teachers might be secured. To this end a syllabus was prepared of a "Study on Children's Hopes," in which full directions were given to the teachers, and children were asked simply to write essays as part of the regular work of the school on the subjects, "What I Want to Do Next Year, and Why," and "What I Want to Do when I am a Man or Woman, and Why." Thousands of replies were received,

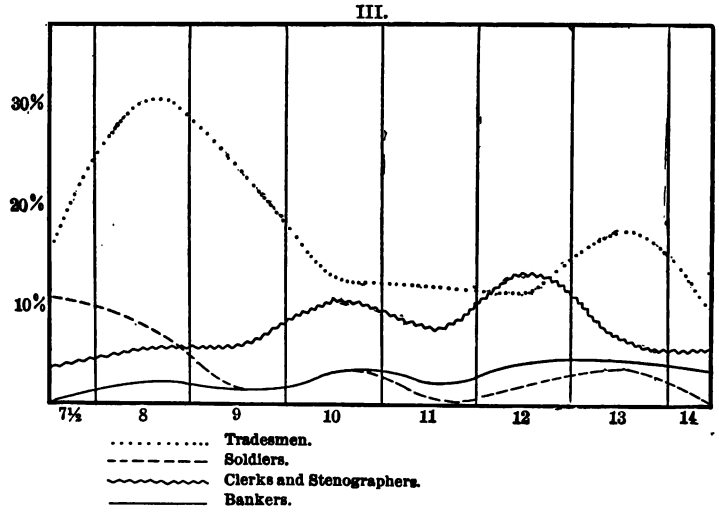
examined and collated. Contrary to expectation, few of the papers were extravagant or impossible in their statements. Especially notable was the contentment with their lot shown by most, the pleasure with which poor children look forward to the severe labors of the future and the willingness to share the bur-



den of supporting the family. It is interesting to trace the increase of seriousness and depth in the reasons assigned in answer to the question, "Why." As regards their attitude towards life the characteristic idea of the more thoughtful, in the last three years studied, seems to be that of giving up the old elastic joyousness and admitting the fact, as one states it, that "there

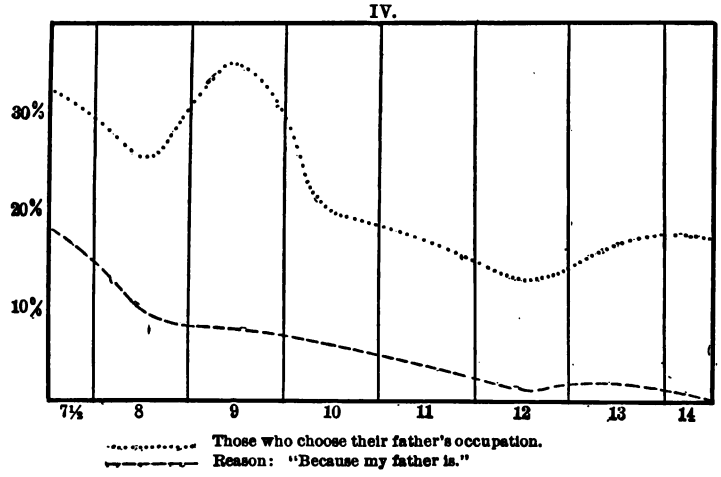
is generally something unpleasant in almost everything." A boy of thirteen says of his chosen profession: "This business, as all others, has its faults, but I will have to be patient and per-

III.



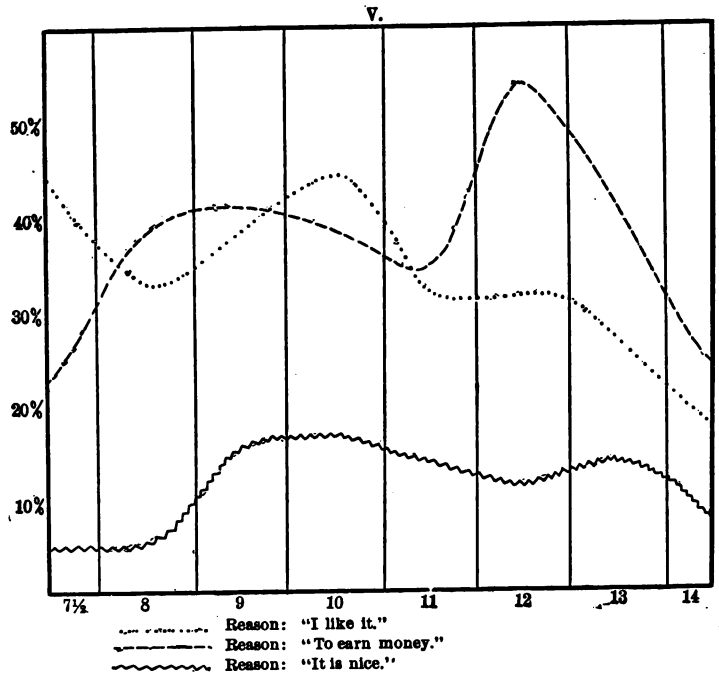
severe." The ethical basis for desiring moral qualities is expressed by a little girl fairly well, "Everybody that does good

IV.



always gets a reward." All are confident that some personal, material or social benefit accrues from virtue and is the reward of goodness.

A most interesting phase of the papers is found in the ideas of children about different kinds of people. Two boys wish to be priests; for, as one says, "I can save my soul." The impression among several seems to be that, "a minister leads a pretty easy life, sitting round doing nothing all day." The lawyer must be "well educated" and "smart," which seems to imply ability to cope with the world; he



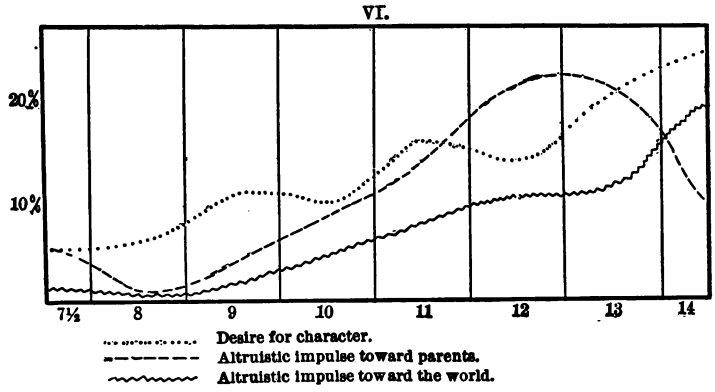
makes "lots of money," and with a few his profession is "noble." Some strange ideas are found, as "lawyers make the laws," it is their duty to "enforce the laws," the study of law "learns one not to disobey the laws and what severe punishment is due to disobedience." Bookkeeping appeals to the girls as "nice clean work," "with good pay," and "easy," provided one is "sufficient in matamatics, spelling and algerbia." With some, present studies are simply preparations for such work, the desire being to "make use of my knowledge." Four boys wish to be President of the United States; their idea of the office seems to be that it confers the power to "stop

saloons and gambling dens," that it enables one to "earn plenty of money," that "it shows people's confidence in you."

Of all subjects of study the one which seems to impress children most in their ambitions in life is geography. This is seen in the desire tor travel which in many amounts to a passion. The influence of history is seen scarcely at all.

The study is, of course, suggestive only. There are many breaks, there are many imperfections, yet it is at least stimulating to summarize briefly what has been found true of the different ages.

Characteristic then of seven is the reply in general, undefined terms, or by mention of those special processes or inci-



dents that suggest an occupation; the desire on the part of the girls to be storekeepers, on the part of the boys to be soldiers; the ignoring of the question "why;" and the statement given as reason for choice of an occupation, that their fathers or relatives have the same occupation. At eight there are as many who give no reason for their choice as at seven; the trades enjoy their greatest popularity at this age. At nine culminates the desire of the girls to be teachers, among the boys the choice of their fathers' or relatives' occupations; and at ten the co-ordinating of desires, and the reasons, "because I like it," "because it is nice." At eleven all the ideas and tendencies are increasing toward a maximum. At twelve we find the altruistic desires for the welfare of parents, the reason "to earn money;" at thirteen, the desire on the part of the girls

to be dressmakers, also to be clerks and stenographers. At fourteen culminate the desire for a business career in bank or office among the boys, the criticism of the question which began at thirteen, the consciousness of life's uncertainties which appeared first at twelve, the desire for character, the hope of doing the world good.

The results of studies have been expressed in the charts shown herewith.

NOTE.—A full report of this study, covering about 40 pp., has been reprinted from the Report of the State Superintendent of Public Instruction (N.Y.). Those interested may obtain this pamphlet gratis by addressing Prof. C. H. Thurber, University of Chicago, Chicago, Illinois, and enclosing a two cent stamp to cover postage.

CHILD-STUDY IN MINNESOTA.

PROF. LOUIS H. GALBREATH.

STATE NORMAL SCHOOL, WINONA, MINNESOTA.*

I have planned to be brief. While hope and faith have been the words used this morning to characterize the work in New York, I would like to say that charity is the word to characterize the work in Minnesota. It obtained its impulse from Prof. O'Shea. He left us, and we have been trying to keep the work going in the spirit in which it was started. We think that love for the children, that sympathy for child life, with the mother and teacher who come in contact with the child, daily, in an intelligent and sympathetic way, is a great object. We have along with that, however, a number of individuals in the state who are trying to study the problem of child-life from a scientific point of view. First, I shall speak briefly of them; then perhaps something of the individual schools, perhaps of systems of schools; then of mothers' clubs; and, finally, of the State Association at large.

In the first place, I would call attention to the work of Dr. Kiehle in the State University. Dr. Kiehle has, this year, I believe, taken up the work of Child-Study systematically for the first time. Wanting his work to be of as much practical value as possible, he has taken up the study of the senses, especially of the eyes. He has undertaken to demonstrate that the teacher, through examination, can learn some helpful things about the eye, and that we do not need to send children to the oculist or the man who sells spectacles to have their eyes examined to find out whether or not they should wear glasses. It is believed that the teacher can decide in a practical way that there is something the matter with the

* Now of the Illinois State Normal University, Normal, Ill.

child's eyes. He is aiming to demonstrate that, and that, in a rough way, the teacher can perhaps decide the difficulty. At any rate, he expects that through that scientific study (I should not say scientific but systematic or experimental), the teacher will be able to advise, to test the eye, and find out whether or not the child needs particular attention, whether the parent should be advised, whether the family physician should be counselled, and whether the oculist should be consulted; that the teacher can get into intelligent sympathy with the children and their defects and give help. (Dr. Kiehle reported at the Congress of Child-Study held this summer during the time of the Educational Congress in Minneapolis.)

Prof. Harlow Gale is also studying children. He first became interested in his own children in the home. He will soon be ready to report his studies of two little children in his own family, which will be made the basis of his lectures to teachers at the summer school. This report will also be made in some educational journal soon. Dr. Gale has also been studying along the line of problems that deal with the imagination. He tells me that he has been highly gratified with the results of his work, as he has been studying with the assistance of his senior class in the university.

Another report is being made by Miss Emily Harris, with the outline of questions for the study of children's reading, suggested by Prof. Thurber. We have taken his outline of questions and given them to all our members and friends in the State, and have asked for contributions.

Mr. Kirkpatrick, who will report to you, is also making some special studies in the Winona Normal School.

As to individual schools or systems, I can direct your attention to the four Normal schools, three of which have been studying children in a systematic way for three or four years. At St. Cloud, Miss Isabel Lawrence has been studying eye and ear mindedness in its practical and pedagogical aspect for two years. At the Mankato Normal School, the one special topic of study, I think, this year, they have pursued more than any other, is the study of children's questions and answers, relevant and irrelevant. To my knowledge, this study is a new one, and Dr. Rowe, who has charge of it, tells me

that he is getting some very fruitful results from that line of study. These questions we have had printed and sent out to members of our Child-Study Association.

We have also a number of school principals in St. Paul and Minneapolis who have been studying schools and children in a systematic way. We have also a number of principals in the state, Mr. Adams, Mr. Van Dyke, and others, and a county superintendent or two, who have been promoting Child-Study in a systematic way, getting acquainted with the schools under their own supervision. This has proved to be one of the most interesting forms of the work. I have been especially interested in the work at Wabasha under Superintendent Van Dyke, in which he studied the reading of children. I was fortunate enough to be present when the teachers brought in their reports. The questions used were those that Professor Thurber sent out. They were placed in the hands of different teachers, and each teacher studied her own room in her own way, made out her own statistical results, and presented these results in the teachers' meetings. There were a good many revelations to the teachers, a great deal of knowledge about children's interests, about the home reading habits, about the kind of material which was accessible to the children. It was found that many boys were reading books that were related to the Jesse James type of literature, or the Harry Hayward type, or the Younger Boys type of Wild West stories. It was found that in many cases, children were reading these books without the knowledge of their parents or of their teacher, and without any suggestion or direction from them as to the worthlessness or harmfulness of the books. I have one boy in my mind, especially. He was fifteen years of age, and weighed one hundred and seventy-five pounds. During five months, he had read something like one hundred and ten books. He could give the names of most of these books. They belonged largely to an inferior and harmful class. The boy in good faith told me that he did not know that what he was reading was at all harmful. Superintendent Van Dyke, in a general talk, stated what was bad in some such books, and how the reading of them should be avoided, and the boy told me that during the past week, since the superintendent's talk, he had

not read any of this class of literature. I found that he often read two books a day. I could not understand how he could remember so many titles, to say nothing of the thread of the stories. I asked him if he could run over the stories in his mind, if he had them confused in his memory, if the different stories were not all jumbled together. He told me that he could remember the stories very much as they had been presented by the authors; in no case did he find the stories confused. I thought it was a phenomenal case of memory, a great work, even in the reading of such literature as that. I studied carefully into his habit of reading, and found that it was not a skipping process to a very great extent, but that he plowed through the pages of something like one hundred and ten books. There was a number of other cases, not so striking. It seems to me that the study in Wabasha revealed the possibility of doing something like systematic work in the study of systems of schools and in getting acquainted with the individual reading of the pupils.

As to kindergarten, or the Mothers' Clubs, I speak of them because I find them associated with the state work of Minnesota. We have three in St. Paul (and the number is increasing) doing propaganda work; four in Minneapolis; two in Duluth, and perhaps others in other parts of the state. Mothers' Clubs have been organized three or four years. For the last two years, especially, I think they have been emphasizing the work of Child-Study. In their meetings they have discussed some such topics as these; I give subjects from an annual program, in order to suggest what they are doing:

"Hygiene of the Nursery."
"Preparations for Motherhood."
"Study of Infant Psychology, and its Value to Mothers."
"Development of the Senses."
"How to Develop and Control the Imagination."
"Literature for Young People."
"Training the Will."
"Spiritual Nature of the Child."
"Social Training of the Child."
"Nervous Disorders of the Children."
"For What are We Educating Our Children?"

In the Mothers' Clubs a great deal is being done to promote reading. Since our society has been organized, I have answered a good many letters concerning what mothers could read to help them guide and direct the children. That will illustrate the spirit and conditions of Mothers' Club work in the state.

The State Organization.—About one year ago, at the Educational Congress, a committee was appointed to promote the Child-Study work of the state. This committee reported at the educational meeting during the holidays. A president, three vice-presidents, secretary-treasurer, directors and executive committee were appointed. Without going into the function of these different officers, committees and boards, I will say that the general direction of the Child-Study work is under the executive board. During the time of discussing whether or not we should have a Child-Study society, and what a Child-Study society should do, and during the planning of the work by the executive board, this thought was uppermost, that in educational work and educational thought and life up to the present time—We have been mainly interested in the objects of education—the general, the theoretical, the physical, the political, and sometimes the commercial objects of education. We have also been largely interested in the methods of different subjects, method in itself, and our educational journals have been full of that. So that the object of education and the method of education were the two main thoughts set forth as points to which attention, up to the present time, has been directed. It was said that we should now seek in a systematic way, in a general organized way, to bring the attention of teachers to the child, believing that a sound pedagogical creed has in it a knowledge of whither you want to take the child, how you are going to take him there, and where your child is. This association is organized with that especial motive of helping the teacher to find the child. We must find him to lead him. We must know his physical condition before we can co-operate with the best in him and counteract that which is evil. Those two ideas have been prominent. We have thought also that we should direct the studies along the line of the physical and social environment

of the child, believing that, until we knew something of these factors which have influenced and are influencing the development of the child, we shall not be able to co-operate with that which is good and counteract that which is evil.

We said that while scientific study of children is proper, while it has its place, while we want to do something along that line in Minnesota, still we do believe that we ought to go to work to help the teacher intelligently to love the child; we should help the teacher to know how to study the child. A teacher must appreciate that what it is, has come to be by casual relations. Can we help our teachers daily to appreciate the causal influences which are possibly affecting the child and which are probably affecting him? So, we believe, in the first place that we can help teachers daily to be more careful in their observations and to make wiser inferences.

We do not want to appear unsympathetic towards the scientific work of Child-Study. The scientific aspect of Child-Study needs trained teachers to help gather data. The great difficulty that scientists find at the present time is that they cannot get a body of co-workers that are trained enough to make careful and critical observations. It was thought that Child-Study could help get teachers ready to co-operate with the scientist. We also thought that after the scientists, from the pedagogical and psychological points of view, had reached their conclusions, if they are to be applied, we should have a body of teachers informed and trained sufficiently wisely to apply these conclusions. So, as you have already inferred, our society organized work along the line of getting teachers to reading and studying for the sake of the teacher, and not directly for the sake of the child. The teachers first; if we can reach them, we can, through them, reach the child. We have therefore outlined our plans with that object in mind, and have sent out some seven or eight communications directing attention to lines of reading, and kinds of study which will help bring about this desired result.

CHILD-STUDY AT THE WINONA NORMAL.

PROF. E. A. KIRKPATRICK,

NORMAL SCHOOL, WINONA, MINN.

In all the work of the school the thought is continually kept in mind that the purpose of the Normal is to prepare for the practical work of teaching, and this thought dominates in all that is done in Child-Study.

The subject is frequently referred to in the psychology and method classes and the students are occasionally called on to give accounts of their own childhood experiences in order to prepare them for understanding and sympathizing with children.

The portion of Child-Study receiving most attention is the study of pupils in the model school under ordinary school conditions. Suggestive outlines are given for observation upon Imitation, Habit, Attention, Perception, Apperception, Imagination, Memory, Conception, and Reasoning, and the student-teachers, after making the observations for a week or two during this practical teaching, make a written report. Oral reports and discussions occur at the meeting for criticisms and at special meetings with the teachers of Psychology and Methods.

During the holiday vacation the psychology pupils are usually asked to make a thorough study of some child, relative or friend, and an outline to guide them is given. The written reports thus obtained are classified according to sex and age of the children, and serve as reference material for the psychology classes.

Experiments are occasionally made upon the model school children often by the student-teachers under the direction of the teachers of Psychology and Methods, who also

direct the student-teachers in the tabulation of results and the making of generalizations. The experiments have been of the following nature: Tests of sight and hearing, observation tests, reaction time tests, both of muscular and mental operation, tests of imagination and memory, and inquiries into the reading of pupils, their earliest memories and ambitions, etc.

The past year a circular letter was sent out to last year's graduates, asking for reports as to what they had observed and done in regard to undesirable school conditions, and trials of individual pupils, and the results. Some very interesting answers were received, and it is hoped that these and other data collected primarily for the benefit the students get in obtaining and reporting them, will have some scientific value. Reports of experiments upon mental images and memory have already been published.

CHILD-STUDY IN KENTUCKY.

MISS PATTIE HILL,

KINDERGARTNER, LOUISVILLE, KENTUCKY.

I am sorry to say that we are not doing very much, but what has been done there has been done by the Kindergarten and by the Educational Department of the Women's Club. The Educational Department of the Women's Club, under Miss Adelaide Schroeder, a teacher in our City Normal School, has devoted this whole year to the subject of Child-Study. In the Kindergarten we have, in the Principals' meetings, taken up the subject of Child-Study, starting with the syllabi of Dr. Hall. We put our pupils to work. The first five months the Normal students are with us they begin Child-Study as directed by Dr. Russell of Worcester. They are given a variety of subjects, and told to go in and observe anything. The last five months they are given one particular subject, and they study upon that, and write daily. At the end of the last five months they sum up their work in a paper. In the selection of subjects two teachers are allowed to take one subject, so that they may, at the end of the time, have an opportunity to compare papers.

The Principals of our Free Kindergarten have what they call Parents' Meetings once a month, and Mothers' Meetings oftener. We have been astonished at some of the results, and at the interest shown by these ignorant mothers, of the most ignorant society—Italians, Russians, Poles—all nationalities. We have given them a subject to investigate, and have been delighted with the results that we have gotten, even from this class of mothers.

So far as I know the work done by the Kindergarten and the work done by the Women's Club within the year is the only work of the kind going on. There has been some interest manifested in our public schools on the subject; during the last month they have applied to us for a little help and some suggestions, but I do not know exactly what they are doing. I think more will be done next year.

CHILD-STUDY IN INDIANA.

MISS NICHOLSON,

PRINCIPAL OF NORMAL SCHOOL, INDIANAPOLIS, IND.

That we are here today is certainly evidence of our great interest in this branch of educational welfare. I have come, personally, to learn, and not to teach.

MISS N. CROPSEY,

SUPERVISOR OF PRIMARY SCHOOLS, INDIANAPOLIS, IND.

I have only a word to say; I, too, have come to learn. I think that it has already been said that we are all engaged in Child-Study, whether we are engaged along scientific lines or not. No teacher can teach the child who is not engaged in Child-Study. I believe that this movement will call our attention more and more to the child. I think we should be astonished as we go through the schools of the country to find what a large per cent. of the teaching force is teaching the subject, and the number of teachers who do not know the differences in children, the differences in power of perception, power of memorizing, power of continuity and strength, in temperament, action and reaction. I believe this study should be begun in the Normal School, and that a young mind begins psychology by looking at the manifestation of mind in this external way, rather than by the philosophical method of getting at the subject. I do not know what we can do in a scientific way in a large system of public schools. We are glad to give assistance to the scientists who are working in this line. We have been glad to lend help to Dr. Bryan in gathering statistics, and shall be glad to work under any one else's direction.

CHILD-STUDY IN MICHIGAN.

HON. HENRY PATTINGILL,

STATE SUPERINTENDENT OF PUBLIC INSTRUCTION.

Superintendent Pattingill reported that C. O. Hoyt, superintendent of schools in Lansing, Mich., the secretary of the Child-Study Association, was unable to be present to report as to the details of the work which has been done and is being done in that state. He had expected to be present, but physical indisposition rendered it impossible. Superintendent Pattengill said that the work thus far done in Michigan in the direction of Child-Study has been of a very practical nature, and that its first and best result had been to create a better school feeling all along the line. One of the great features in Michigan has been the mothers' meetings that have been of great advantage in creating a newer and stronger interest in the schools and bringing about a better relation and more complete co-operation between the patrons and teachers. Great praise was given by Professor Pattengill to the work which principal Miss Harriet Marsh had done in the Hancock school district in Detroit. It was here that the attitude of the community toward the schools had been entirely changed for the better by means of mothers' meetings. Nearly two years ago a committee on Child-Study was appointed by the Superintendent of Public Instruction in Michigan, and as a result of the work of this committee a Manual on Child-Study has recently been issued which gives a brief history of the Child-Study movement, copies of some of Dr. Hall's syllabi, some of the reports from Professor O'Shea and quite definite information concerning the work in Mothers' Meetings. Several programs are given. This manual is published by the Department of Public Instruction, and is sent free to every one who applies for it.

CHILD-STUDY AT THE STATE NORMAL, YPSILANTI, MICH.

ADA VAN STONE HARRIS.

The work we have been doing in the State Normal School has been of a very elementary nature, and this special line of Child-Study has been confined to the present semester largely. However, all through the year, and in previous years, our kindergarten and first grade teachers have made a special study of children, directing student teachers to observe the children very closely. This present semester, we have tested the eyes of all the children in the training school. The testing has been done by student teachers. I have been very much gratified with the result, as it has lead our teachers to be more sympathetic and more charitable. We have discovered that a very large per cent, I cannot give you the exact per cent, but a very large per cent, of the children have defective eyes. After that, we took the temperament blank, as outlined in our manual for the state work, and each senior in the training school has been given a child to observe regarding his temperament. They have filled out this temperament blank. I think we all have been very much gratified at the earnestness and enthusiasm with which teachers have taken up this work, and the results have been very good. We hope eventually to report statistics. We shall have a report in our next manual.

Since this study began, the students have become so interested in our work that a Child-Study Round Table was organized by volunteers, and we have something like seventy-five names on our roll. This round table was voted to meet once in two weeks, but there was such an interest in the work that we now meet every Saturday morning from 9 to 10

o'clock, following the syllabi in our manual from Dr. Bell. The work has been reflective, largely. The students have looked back and reflected upon their childhood, and given reports upon reading matter, love for stories, kinds of stories, effect upon them, and in some instances they have noted the effect of a similar story upon younger brothers and sisters, and in the training school.

Our teachers are, this week, beginning an investigation of games. We have made a list of in-door and out-door games; its purpose is to have children select three they enjoyed most and state their reasons for enjoying them.

I think that is all we have done, but we have been very much gratified with the work, and I know, although it has been of very simple nature; our students are going to be much more interested in the children, and filled with enthusiasm and desire to investigate along this line further."

DR. PUTNAM.

I wish to add one single point. We have prepared a syllabus, borrowing from everybody we could and adding a little ourselves, and we have gathered together quite a large number of reports. I have not yet had time to study them so as to give any results, but I am anticipating considerable helpful results from the matter.

SOME OBSERVATIONS MADE IN THE LANSING, MICHIGAN, PUBLIC SCHOOLS.

C. O. HOYT, SUPERINTENDENT.

1. C. S., male; age 14; sanguine-lymphatic temperament.—Defect of hearing caused by scarlet fever at four years of age. Seems to listen with the mouth. Since being placed near the teacher an improvement is noticed.

2. E. B., female; age 11; nervous-bilious.—Attracted attention by marked periods of dulness and extreme interest. Complained of headache. Was very nervous at the close of the day. She would not do work placed on black-board, and finally admitted that her eyes hurt her. Eyes tested and fitted to spectacles. This proved an effective remedy.

3. C. P., male; age 9; Lymphatic.—Attracted attention by his inattention, carelessness and mouth breathing. The watch test revealed defective hearing; the watch could be heard only at two feet. An examination revealed adenoid growths. Their removal makes him one of the brightest pupils.

4. T. S., male; age 9; nervous-bilious.—Was thought to be exceedingly dull; defective hearing was found to be the cause. Cause is unknown, but his removal to the front seat makes him one of the brightest pupils in the class.

5. C. G., male; age 13; nervous-sanguine.—Formerly thought to be mentally deficient. Was stubborn and hard to manage. The head is peculiar in shape, being oblong in general form, tapering toward the top. The back of the head is flat, with a slight fullness at the base. Voice is thin and high. He stammers. He studies hard, is good in arithmetic, writes and draws well; memorized slowly. Experience has shown that by coaxing, overlooking and letting discreetly alone, when stubborn, that he is soon over these fits. Being sensitive to praise and blame, he is kept well at his work by taking advantage of this.

6. J. O. D., male; age 15; nervous-bilious.—Has recurring periods of good and bad days. At first he will work industriously; can be governed by a look. After this enthusiastic period there always comes a time of dreaming and listlessness from which he can only be aroused with difficulty; he does not answer questions and seems dazed. In about four days he comes out of this state. Near the close of the day is extremely nervous, and is often excused from school. Nothing that has been done has helped him. The cause of this manifestation is found to be the practice of onanism.

7. H. W., male; age 9; bilious.—A bony process is growing in the roof of the mouth, near the front downward. It resembles a tooth. The front teeth are pushed outward, and the speech is materially affected. The teacher first discovered this, reported to parents. At the proper time it will be removed.

8. J. K., male; age 7; lymphatic.—Just entered school. When first attempting to write he was found with the paper inverted, beginning at the lower right hand corner, writing to the left, the writing being inverted. He could write quite well this way. He has now been taught to write properly.

9. H. N., female; age 10; nervous.—When six months old she had typhus fever and whooping-cough at the same time. As a result the limbs are paralyzed. Did not sit alone until two years. Walked at four. Is very nervous, and is hesitating in speech. The head is abnormally large. Great care is exercised not to over-excite. She is allowed much freedom and spends much time in the open air.

10. C. W., female; age 12.—Third grade. Subject to fits; the mind is undeveloped, being about the same as that of a child of seven. Walks with a shambling gait and maintains a stooping posture, caused by spinal disease. She is marked in rhythm. This child has made little progress. Should not be in the public schools, but is one of a large class that should be placed in a special school.

11. M. G., female; age 11; nervous.—The difficulty is made apparent in language. Acquires thought quickly, but in the attempt at expression the confusion of words ensues. Not being able to pronounce certain words plainly, she soon becomes excited, and if allowed to continue, her sentences are

unintelligible. The management is very simple. At such times she is asked in a quiet way to stop and think, or a question is carefully asked to divert attention. Self-control is soon gained and she may then be understood. Great gains have been noticed.

12. J. H., female; age 12; nervous-sanguine.—Second grade. The father is dead, mother hopelessly insane. Eyes and ears defective, a feeble mind and has fits of insanity. By cultivating the two defective senses a marked improvement has been seen. Very little can be done, however.

13. E. L., male; age 14; nervous.—Reported by his teacher as follows: "The child learns easily, keeping his work up with apparently little effort, though not physically strong. At the first part of the year he was continually pouting, moody, and apparently very unhappy. On talking with him I found that he was very much attached to one of his teachers, and whenever she praised or paid marked attention to another it made him very miserable. I explained to him what unhappiness such a disposition would cause all through life, and that this teacher loved him just as dearly, while she loved other pupils as well. He seemed thoroughly to understand himself, and replied: 'I know I am just like papa. He is so sensitive and jealous that sometimes he will not speak to any of us at home.' Such proved upon investigation to be the case. We have taken care not to do anything to make him jealous, and have been very careful to show by word and deed that we are his true friends always. He has grown to be exceedingly trustful and happy, and rarely ever shows any signs of the old trouble."

14. F. T., female; age 8; grade 1; lymphatic.—Reported by her teacher as follows: "F— has been in school since September, 1892. When she entered school in September, 1893, for I did not have her the first year of her school, I supposed she had never been to school, as she seemed to know nothing of school work. She generally came in late and walked quietly to her seat, not noticing anyone. She would always come forward with her class, but would answer no questions. Deafness was at once suspected, but I observed that when she was asked a direct question, she touched the

pupil standing next to her, it seemingly being understood that that one should answer for her. She never played with other children. The first attention she ever gave me, for I had treated her kindly, not seeming to notice her while watching her all the time, was one morning when I wore a red waist. She came up to me and put her hand on my collar. After that she would often come and hold a part of my dress or smooth my hair. About Christmas I asked the class a question and she answered, speaking for the first time in school. Answers were now frequent, but during the next year it was a continual care to keep the child roused, for though she seemed anxious to please, she could not work alone.

"This year she is like other children, and while talkative and full of life she is very sensitive. While now bright, she has been in school three years, and is only doing good first grade work, such as is done by others of six years."

15. C. S., female; age 7 years, five months; weight 23 pounds; height 2 feet 10 inches.—Apparently well developed. At birth she weighed 7¾ pounds, and for the first two years was like other children. The temporary teeth have never been replaced by permanent ones. She eats heartily, is well, but in the last two years has only gained 1½ pounds in weight. Eyes are defective, otherwise senses are exceedingly active, motions quick, and her progress in school work is very marked.

This peculiar physical defect has seemed to increase the mental activities.

16. B. A., male; age 13.—B.— entered school at six. He continued in school until twelve, when he was placed in the school for feeble minded. At the time of leaving he was in the second grade. Physically he seemed well developed. Did not talk until long after the time when he should, owing, so his physician reports, to a nervous affection of the organs of speech. From the time he was four weeks old he was severely punished; was hit upon the head and given narcotics to quiet him. When eight years old, becoming entangled in the wheel of a wagon, one limb was so severely mangled that amputation was necessary. As he grew older grosser instincts developed rapidly, and he was soon an unfit associate for children. He is now reported as improving very rapidly.

LETTER FROM NEBRASKA.

PROF. G. W. A. LUCKEY

UNIVERSITY OF NEBRASKA.

I owe you an apology for not fulfilling my promise to write up the History of Child-study for your meeting to be held on the 14th of May. I had hoped that there would be a possibility of my attending the meeting and delivering the message in person.

As you know, our State Society was formed last January with an enrollment of about 75 members which has now increased to 112 members. The following officers were elected at the January meeting. President, Mrs. Grace B. Sudborough, Omaha; Secretary and Treasurer, Mrs. E. T. Tucker, Lincoln; Executive Commmittee, G. W. A. Luckey, Chairman; H. R. Corbett, State Superintendent; A. W. Norton, President State Normal; H. K. Wolfe, Professor of Phil., University of Nebraska. They were instructed to prepare a plan of work for the coming year, beginning with July. This committee will meet on the 6th of June to carry out the instructions of the Society. So as yet our organization is in rather a chaotic state; for that reason very little systematic work has been attempted. There is considerable enthusiasm among the members throughout the State and a great many teachers are turning their attention in the direction of the child. Considerable material is also being gathered which will be of use later. The officers are receiving frequent calls to address institutes on the subject of Child-Study. Additional names are continually coming in, though as yet no effort has been made to increase the list. After the meeting of the Executive Committee in June active steps will be taken to increase the membership of the Society, as well as to begin systematic study.

The State Reading Circle Board at their recent meeting adopted two lines of reading for the coming year: Child-Study and History. This will be, no doubt, of great importance in turning the attention of the teacher to the work. We are now conducting a department of Child-Study in the "Northwestern Journal of Education," and the July number (which is to be a special number), will be devoted wholly to Child-Study.

I expect to devote most of my summer to lecturing upon different phases of Child-Study before the different teachers' Institutes of the State. Perhaps I should say that considerable individual work in Child-Study in this State was done prior to the organization of the State Society. Mrs. Sudborough has been doing more or less work in connection with her training school for several years, and for the past five years Dr. H. K. Wolfe has been conducting courses in Child-Study in the State University. This work has formed a nucleus out of which the State Society was developed. We hope by next year to get fairly on our feet and to be able to make the Society of practical benefit to teachers, parents aud children.

I feel very much disappointed that I cannot spend the week with you at your State Convention. We look with great pride upon the Illinois Society for Child-Study and believe that for practical work the movement in your State ranks first.

Let me send greeting and many wishes for a prosperous meeting.

Most truly yours,

G. W. A. LUCKEY.

CHILD-STUDY IN ONTARIO.

BY F. TRACY, PH.D.

The Ontario Association for Child-Study was organized in April, 1895, as a section of the Ontario Educational Association. Dr. Tracy, of the University of Toronto, was elected chairman and Miss M. E. MacIntyre, directress of the Toronto kindergarten system, was made secretary. The executive committee is large and representative, containing university professors, model and normal school principals, school inspectors, kindergarten teachers and some interested private individuals. At the annual meeting of the O. E. A. for 1895 Child-Study was given a prominent place. Several addresses were given on the subject of the Relation of Child-Study to Pedagogy, at the afternoon sessions of the section (published in the proceedings of the O. E. A.), and at one of the public evening sessions Dr. G. Stanley Hall, of Clark University, gave a most inspiring address on the same subject.

During the summer and autumn the committee met at regular intervals, discussed plans and arranged for the work of the convention of 1896. A circular was issued on "Left-handedness" and another on "Fatigue." The chairman undertook to report on the former subject, and Mr. S. B. Sinclair, of the Ottawa Normal School, on the latter.

At the association meeting of April, 1896, the interest in this subject was greater than ever. Four papers were given before the Combined Training, Kindergarten and Child-Study departments; and a most interesting Round Table was held, with about fifty persons present. The four papers read were as follows: (1) "Moral and Religious Ideas of Children," by Rev. J. McEwen; (2) "How to Study the Child," by Inspec-

tor J. L. Hughes, Toronto; (3) "Left-handedness," by Dr. F. Tracy; (4) "Fatigue," by S. B. Sinclair, B. A.

Mr. McEwen's paper consisted in reality of an introduction to the subject of the "Child's Place in the Great World-Religions"; and, at his own suggestion, he was instructed to pursue his study for another year along the same lines, and present the results at the next meeting. Inspector Hughes' address was a very practical and much-needed talk on what to observe and how to observe it in the life of the child. Mr. Sinclair's paper consisted of results of investigations into the causes and characteristics of "Fatigue." Mr. Sinclair's object is to reach some data upon which we may proceed in the arrangement of studies, recreations, length of school hours, etc. This paper led to a good deal of discussion, and formed the chief topic at the Round Table. It is to be published in the proceedings of the association. The executive committee have decided also to co-operate with Mr. Sinclair in further prosecuting the study of this subject during the year. He would be glad of any help from the Illinois Society.

Dr. Tracy's paper is published herewith in full. It was also requested for publication in the Proceedings.

LEFT-HANDEDNESS.

BY F. TRACY, Ph.D.

The subject of this paper is full of a speculative interest; and is not without a certain pedagogical and practical bearing as well. There are three main facts around which the chief interest gathers: (*a*) That from the remotest ages and in all countries, human beings have used habitually and preferentially *one* hand in the performance of certain acts. The distinction of right and left-handedness is very ancient and very widespread; (*b*) that the preferred hand, in the vast majority of cases, is the same hand which we now know as the right hand, viz: that hand which is on the south side of the body when one faces the east; (*c*) that everywhere and in all ages there has been a small minority (probably about two per cent), who prefer the other hand, and are therefore called "left-handed."

The distinction is a very old one. Biblical history is full of it; all languages bear witness to it. The left hand is called, in almost every language, by a name which originally meant "clumsy," "foolish," "mistaken," "dirty," "unlucky," or something of that sort.

Moreover, not only is the evidence overwhelming for this first fact of a very widespread preferential use of *one* hand; but the evidence is almost equally conclusive for the second fact, viz: that in every age and country, the right hand is the same hand that we now call by that name. Sir Daniel Wilson found, in his researches among the remains of Palaeolithic art, that drawings in profile were, in the great majority of cases, made facing the left—obviously the natural position for the work of a right-handed artist.

If we turn now from the *facts* to the *reasons*, and inquire: Why is the human race predominantly right-handed? and why

is that particular hand preferred and honored? The two questions do not present by any means the same degree of difficulty. The first is much more easily answered than the second. The number of human occupations in which, in an organized society, co-operation is necessary; and the number of those occupations in which it is necessary for those who co-operate, to work the same way (*i.e.*, with the same hand) is so great, that we can readily understand how, as soon as society had become to any appreciable degree organized, these circumstances would operate in a multitude of ways to bring about uniformity in this respect. But when we ask: Why is the right hand the right hand? *i.e.*, why is the dextrous hand so universally the same hand, on the same side of the body? the reason is not so easy to discover. Carlyle deemed it an insoluble riddle. Many investigators have labored upon it, and various answers have been suggested. Some have considered it an instance of the survival of the fittest. Since the heart is on the left side, say they, those warriors who carried the shield on the left arm, and fought with the right hand, were better protected as to the heart than others, and were therefore less frequently killed in battle. Others again tell us that the right side of the body is better supplied with blood than the left, and is therefore stronger; others that the left cerebral hemisphere (which controls the right side of the body), is developed earlier, and grows larger, than the right. Sir Daniel Wilson seems to attach a good deal of importance to a case which came under his observation—the case of a left-handed person, whose *right* cerebral hemisphere was found to be distinctly larger than the left. The case seems, however, not quite conclusive. The fact is overlooked, that the superior weight of the right brain may just as well have been the *effect*, as the *cause* of the left-handedness. Others account for the prevalence of right-handedness by the fact, that, in persons of normal anatomical structure, owing to the arrangement of the vital organs, the center of gravity is not in the middle line of the body, but slightly over towards the right; and thus the focus of the bodily movements is to the right of the middle line, and the right limbs consequently more strongly exercised than the left. This would seem at first

sight a probable explanation, but it fails to account for the fact that those persons in whom the vital organs are transposed—the heart being on the right side, the liver and the heaviest lung on the left—are as frequently right- as left-handed.

The Association for Child-Study naturally became interested in a subject so closely connected with the early training of children in the schools; and it was thought that an investigation, carried on by the teachers of the Province, into the cases of left-handedness which might come under their notice, might not only throw some light on the theoretical question as to the source of right- or left-handedness, but also (and this is what we most desire), might afford some practical guidance in the matter of dealing with left-handed pupils. Accordingly, the following circular was issued in October, 1895, to a large number of the teachers of the Province of Ontario; and though the number of answers received is comparatively small, yet they contain some valuable data on the subject in hand. The present paper is an attempt to summarize these results.

SPEECH AND LEFT-HANDEDNESS.

TORONTO, October 19, 1895.

The recipient of this circular is earnestly requested by the Ontario Association for Child-Study, to aid in the investigations undertaken by the Association for the current year, by carefully observing the children under his charge, and answering, as fully as possible, any or all of the following questions:

(1) In cases of left-handedness, is the use of the left hand *less expert* than, in your judgment, the use of the right hand would be in a right-handed child of the same age and circumstances?

(2) Is the left-handed child less adroit in the use of the speech faculty than other children? Is stammering, stuttering, or other awkwardness, more prevalent among left-handed than among right-handed children?

(3) Does the left-handed child, in moments of special excitement, gesticulate with the left, or with the right hand?

(4) Speaking generally—of all children—do you find that awkwardness in gesture is accompanied by hesitancy of speech?

(5) Describe any attempts you may have made to break children of the habit of preferring the left hand, and give your judgment as to the value of the results attained.

The answers to these questions will be considered by a Committee and the results presented in a paper to be read at the next meeting of the Ontario Educational Association (of which the Association for Child-Study is a sub-section). You will confer a great favor by making these observations with all possible care, and sending your answers to the Chairman before January 15, 1896. Please note in every case the age, sex, and any special circumstances of the child.

F. TRACY, *Chairman*, The University of Toronto.

MARY E. MACINTYRE, *Secretary*, Toronto Normal School.

The nature of the question was determined to a great extent by the consideration, that between the right hand and the speech-apparatus there must be a very close and intimate relationship. The right hand and the tongue are the organs par excellence for the expression of ideas, the cerebral center for speech, and the center for movements of the right hand is (in right-handed persons) close together in the left hemisphere. Cases of aphasia are on record, in which the speech disturbance is accompanied by peculiar disorders in the writing power. It seemed to us, therefore, that questions bearing on their actual relation in practical life, might bring valuable results.

To the circular, about seventy-five or eighty answers were received. Some of these represent individuals, but in many cases the combined judgment of a school of a dozen or more teachers, is given in one letter. Moreover, a good many of those who wrote individually, described their observations of two or more cases; so that the total result of the circular is the judgment of several hundreds of persons, based upon observations of a still larger number of children.

The returns came from almost every part of the Province, the cities furnishing the largest number. The age and sex of the child are not always given; but so far as they are given it appears that a slightly larger number of boys than of girls were observed; and that a large majority of the cases were between 5 and 7 years of age. In some cases the questions are answered categorically, without any explanation; in others, quite interesting details and explanations are given.

The first question was asked with a view of determining whether left-handedness is as deeply rooted and as "innate" as right-handedness; and also whether there is any intrinsic difference between the two hands so as far as the *capacity to become expert* is concerned.

In response to this question, a very large majority declare without any hesitation, that the left-handed child is fully as expert with his left hand, as the right-handed child is with his right hand. A good many go so far as to say that he is even more expert in nearly everything except penmanship; and some find him more expert even in that. Left-handed boys are found in many cases, particularly expert in throwing a ball and similar occupations. One teacher says: "I have had only one left-handed pupil, and she is about the cleverest pupil in the school, in every way." (It has been suggested that the superior skill of the left-handed persons, if it be a fact, is due to the circumstance that efforts are constantly being made to make left-handed persons become right-handed; and thus only those in whom the left-handed tendency is exceptionally strong, hold out against the coercion of the majority. On the other hand, this very fact is alluded to by some teachers as explaining the inferior adriotness of left-handed persons, wherever this is the case. These persons are constantly being meddled with, and prevented from becoming as expert as they should, with the left hand.) As regards penmanship, several observers suggest that the left-handed child would be equally expert in this also, were he permitted to write from right to left (mirror script), for then the conditions would be the same as those of the right-handed penman. And this appears reasonable if we reflect that in the spontaneous hand-movements of the infant, the hands, if they describe curves, will make those curves, moving not in the *same*, but in *opposite* directions (*i.e.*, if the curves made by the right hand follow with the hands of a clock, those made by the left hand go to meet the hands of the clock).

The second question presupposes the answer to the first. If the left-handed child should turn out to be less expert with his left hand than a right-handed child is with his right hand, there would be some ground for the surmise that the right

brain, to whose control the left hand is committed, is less adapted for expressive functions than the left brain; and it would hence follow that *if* the tongue and the dexterous hand are always associated in the same hemisphere, the faculty of speech would, in a left-handed person, labor under the same disadvantage. But as the first question was answered in the negative, there was no reason to suppose the right brain to be in any way inferior to the left; at least so far as the observed cases were concerned. Hence the answers to the second question were what might have been expected. The majority are emphatically negative. The left-handed child does not stammer or stutter more than other children. There are, however, a few instances to the contrary; and one of these is quite remarkable, viz., a left-handed child who stammers, while his brothers and sisters, who are right-handed, are not troubled with any hesitancy of speech.

The third question was asked with the view of determining how deep-seated and natural left-handedness is by an appeal to emotion. Under the pressure of strong emotional excitement we are apt to show what we really are, independently of *acquired* habits. This question brought fewer answers than any of the others, but those who answer it are nearly unanimous. The left-handed child gesticulates with his *left* hand. In a few instances the gestures are said to be made "sometimes with the left, sometimes with both." In two cases the child has been "broken" of the use of the left hand; but in moments of special excitement, or when great speed is required, he returns to it. These answers leave no room to doubt that left-handedness is as deep-seated and natural as right-handedness.

The fourth question brought about seventy answers, the majority of which are affirmative. The awkward child is apt to be troubled with hesitancy of speech. Several of those who answer this question in the affirmative take pains also to point out that hesitancy of speech may *cause* peculiarity of gesture—the child is trying with his hands to "help out" his stammering tongue. Others again point out the fact that hesitancy of speech and awkwardness of gesture, are common results of a single cause, viz., nervousness; a fact which I can fully corroborate from my own observations.

The fifth question requires, first, a description of the means employed to break children of left-handedness; and, secondly, an opinion as to the value of the results attained. Quite a large number replied that they had never tried to cure left-handedness in children, believing that *the left hand is the right hand* for some persons. Among those who made the attempt, the means employed varied all the way from gentle persuasion—showing how awkward a left-handed person looks, and pointing out that everybody else uses the other hand—to tying the left hand behind the pupil's back. I am glad to say that very few tried this last method. Some offered rewards for using the right hand; some persuaded; some took the pencil out of the left hand frequently and placed it in the right; some would refuse to accept exercises done with the left hand; some would make the pupil go to the blackboard and use the chalk with the right hand.

As to the results: A very pessimistic tone runs through nearly all the answers to this question. A great many say the attempt is utterly useless, except in the case of the very youngest children, those in the primary grades. Some say it is practically useless with any child, as he will return unconsciously to the use of the left hand. Some say that they succeeded, but add that their success was in reality a failure, inasmuch as the child never attained to that degree of efficiency with either hand, to which he might otherwise have attained. However, there are quite a number who claim to have succeeded tolerably well; others who claim success so far as the *pen* is concerned, but do not think it worth while to try in anything else; and others, a considerable number, who devote themselves to *training the right hand along with the left*, believing that the child ought to be, and can be ambidextrous.

A very interesting question which might have been asked, had it seemed probable that the teachers would be in a position to answer it, is the question of the *heredity* of left-handedness. The fact of heredity in general occupies so prominent a place in all scientific theories of the present day that one might almost deny the adequacy of any scientific hypothesis which fails to take it into account. We have

whole volumes devoted to the subject, and, as you know, an exceedingly interesting discussion is going on among the evolutionists on the question as to whether acquired tendencies can be transmitted. I have received a letter, through the kindness of Inspector Hughes, containing some interesting information regarding a special case; a case in which left-handedness is found in three successive generations. The grandfather is left-handed naturally, but was "broken" of the habit, having learned to use the right hand while the left was being carried in a sling as the result of an accident. "But still, when he is in a hurry, he will pick up a knife or other tool with the left hand, but he is obliged to transfer it to the right hand, which is the more skillful. The grandmother is left-handed in all her work. In the second generation, out of a family of six, one brother is right-handed; two of the sisters are practically right-handed, but use the left hand in such tasks as tying a knot or threading a needle; the remaining three are entirely left-handed. In the third generation the family of one of the sisters mentioned above as partly left-handed, consists of three boys and a girl. The youngest boy is an infant, too young to show any preference for either hand. The daughter is right-handed. The eldest boy is naturally left-handed, but has become right-handed through persistent training; but in the case of the second boy (who also is by nature left-handed), the net result of all his father's effort has been simply to make him ambidextrous and very awkward with both hands, evidently much to the father's disgust. "He apparently does not know the difference (*i.e.*, between his right and left hand), and writes, throws and catches a ball, etc., with the right or left hand," as may be most convenient.

Summarizing all the foregoing, we may say that, in the judgment of a majority of those who answered our circular, the left-handed child is equally expert with the right-handed child, except possibly in the use of the pen; that left-handed children generally speak as readily and as fluently as others; that when excited, they gesticulate with the left hand, showing that in their case the use of the left hand is perfectly natural; that hesitancy of speech and awkwardness of gesture

are often found together, the former sometimes causing the latter, but more frequently both being effects of a nervous temperament; and that attempts to break children of left-handedness are usually unsuccessful. There would seem, indeed, to be only one reason for making the attempt at all, viz., utility. Whenever the resulting convenience is likely to outweigh the trouble undergone, and in no other cases, does the attempt seem justified.

FROM THE GENERAL DISCUSSION.

MISS HOWE,

TEACHER FROM KOBE, JAPAN.

I will only say that we are making a beginning in this Child-Study, in Japan. In the Kindergarten, with which I am connected in Kobe, we have done a little, and it has been through the kindness of Dr. Hall and Professor Barnes. Eight years ago, when I went to Japan, I went with the hope that I might not fall behind too far in what was being done here. I felt that if we wanted to do anything there, we must do the very best. Having heard of this Child-Study movement, I wrote to Dr. Hall and Professor Barnes, and they very kindly sent letters and helps. I put the matter in the hands of my professor of psychology and pedagogy in connection with the training school. That man has been the trial of my soul! that professor, I mean. I gave him the helps, but had to let him do the work, and such work! I have caught him sailing into the Kindergarten in the morning with the girls of the training school all tagging at his heels. They would sit down, look at the children, and then write; look at the children some more, and then write. When I tried to impress it upon him that was not the way to do, he would simply smile at me.

But the work has been begun. We have taken Professor Barnes' story about Tommy, who wandered along the river bank, and used it with the children; it has been illustrated by the teachers in the Kindergarten. Teachers have taken the results and looked them over, and tried to compile results from the work. From that little beginning they have gone on, letting children illustrate their own stories. It is just a beginning, but I am filled with delight, as I hear these testi-

monies to-day, and feel how you are coming more and more to believe that you must study the child physically and mentally as well as morally. I have a great longing in my soul to have the teachers in Japan able to know if the children are being hurt in the Kindergarten and schools because they do not know how to take care of them physically. I want the teachers to be able to know if the children's eyes are not right, or if they are physically unable to do the work given them to do. It is a dream of mine to have that thing accomplished there.

In connection with the public schools of Japan, let me say that last year I had a visit from a professor from the University in Tokio. He is really making a scientific study of physical defects of children in Japan.

If any of you have any syllabi or helps along this line and will send them over to Japan, I shall be only too delighted to receive them.

MRS. HUNT, LUCKNOW, INDIA.

I am delighted to have the privilege of being at this Convention. I heard of it through one of your pupils of the Cook County Normal School, and I shall be forever grateful to her for letting me know of it. I have made Child-Study the study of my life. You will understand better why when I tell you that it was because I was left an orphan at an early age, and I felt the need of being studied myself. I was very, very reserved as a child, and longed that people should know me. I finally went into a normal school in India, at Calcutta. It was very carefully conducted, and I had wise and good teachers. These teachers were from England, and we had a regular normal training plant. We had a school to practice in, but it was nothing like this institution nor the practice work here for the young ladies. We were only ten, a very limited number, but we were carefully trained to teach all that could be taught in a course of three years. The training that we had was specially for missionary work. That work was shut off from me for a time because I married sooner than I ought to have done, I suppose; but the Lord called me to it again, and I have always been thankful for that. The Lord is always better to us than our own thoughts. I

have been teaching now for fifteen years. For the last nine years, I have had charge of the high school department of the Methodist Mission School at Lucknow, and I have made it a prayerful care to study each child I possibly could. We have had a school varying from one hundred fifty to one hundred seventy children. We have a kindergarten class of about forty or fifty little children, and we also have a B.A. graduating class in the college department. But my special care has been to study every child that I came in contact with, from my own senior class in the high school department to the little children. I can not go into the scientific method of it because I hardly think we have been making a science of it until the last three or four years. I used to leave my room open so the little children might come in whenever they pleased. I always have four or five little children about me, and just let them do as they please, as long as they do not do anything they ought not to do. I have always tried to have educative pictures about my room, pictures that could not help doing children good; I have always tried to have my room very pleasant, keeping flowers about, so that the older girls would enjoy coming into it. We have flowers in great abundance in India; the city of Lucknow is now called the "City of Roses," and we are rich in flowers. During some of the months, when we have no flowers, we have beautiful grasses, so I collect pretty grasses and leaves for my room. The older girls, young ladies, and the little children, come into my room, and I love to have them about me and love to talk with them.

I want to say about the little children in India, that somehow some of them grow up into a deceitful way. I think this is due to the training they receive at home, and is not from their nature. They are frightened into being deceitful. I was very much distressed about this, and I felt that I would do what I could do to stem this current of deceit, which some people think is innate. I do not believe it; for I have faith in the little children. I respect them with my whole soul. I think there is good in them all, if people only knew how to get at it. Little children are sometimes sent to me for telling falsehoods. I send them away and make them sit still for a

little while—do not try to scold them—then begin to talk to them, and very often they will frankly tell me all about their troubles, how it all happened. I think, nine cases out of ten, they will tell the whole thing from beginning to end. Sometimes, perhaps, they take things that do not belong to them.

I tell you that every mother and every woman that has a mother's heart, for I believe every woman has, under God's direction, will set to work and take up this Child-Study, as an inspiration from God, whether they do it scientifically or not. I want you to pray for my work in India and for the whole movement. I am interested in every department of work there, but especially in the work among the young.

COL. F. W. PARKER.

The great value of this work is to find out how you are doing things. This is a many sided thing. Every one finds something that no one else finds. The great thing of this Congress is to put our treasures together. No movement in education has ever had the impulse that this has had, nor the widespread interest, and no movement has ever been so adapted to getting the mothers and fathers interested. I think, this morning, I have been interested, myself, in everything that has been said. When state superintendents are willing to enter into this work, when the young and old men of our normal schools are studying this matter, I think we can take great hope in this direction.

INVESTIGATIONS IN PUBESCENCE.

A. H. YODER.

Birth and its preceding processes; *infancy*, a period of immaturity; *pubescence*, a period of accelerated growth and the establishment of the reproductive function; *maturity*, the time of physical perfection; *senescence*, a period of decline; and *death*, is the history of every typical individual, whether a cell, an animal or a man.

There are two essential processes which concern the life of the individual and of the species, *nourishment* and *reproduction*. In the life of a given individual the maintenance of its own existence comes first; after that has been fairly well provided for by growth in size and powers, provision for the maintenance of the species is cared for by the establishment of the reproductive function. This function can be established only after a minimum requirement of the individual has been met. It seems to me that the instituting of this new power must be a subject worthy of investigation. . . .

Among the single celled animals and plants growth in size is followed under normal conditions by a division of the cell into two independent organisms. Dr. Coulter says: "Plants go through a period of preparation for this reproduction, and I should say that the period of pubescence is as well marked in plants as in animals." Higher in the scale of life there are many animals having both reproductive elements in the same individual. Protandry, the development of the male element before the female in hermaphrodite organisms, is very common, says John Lubbock, both among plants and lower animals.

Dr. Minot, of Harvard Medical College, made a very careful study of the growth of guinea pigs. He found that

the females at birth are slightly smaller than the males, during the first month decidedly larger, during the remainder of the first year considerably smaller; but when adults, again decidedly heavier. In man, the greatest fluctuation in growth is associated with pubescence, there being, as discovered by Bowditch, a pre-pubertal acceleration and a post-pubertal retardation, both modifications being greatest in girls. I think that a similar fluctuation occurs in guinea pigs, though to a very much less degree. Pubescence appears to be at about four months, but is evidently extremely variable.

An analysis of Dr. Minot's table, No. XXX, shows that for at least fifteen days the female is gaining at a more rapid rate than the male. It is one-eighth of the age of the animal at that time. Comparing this with the growth in man, we find that the girl is heavier than the boy for about the same time., *i.e*, one-eighth of the life then lived.

Dr. Wesley Mills, of McGill University, Montreal, says in private correspondence: "I have bred rabbits, guinea pigs, cats, and especially dogs, pigeons and fowls extensively for years. This breeding has been chiefly of pure-bred animals. I am satisfied that all these animals pass through a period of pubescence which is marked by both physical and psychic changes. We can as distinctly note the steps by which the 'puppy' passes into the 'dog' as the 'boy' into the 'man'." . . .

I have made a study this year of white rats, and find (1) that the male is heavier during this period than the female; (2) that the female matures first, at about 70-80 days; (3) that the female gains more rapidly during this period; and (4) I have found a certain physical sign of the change of great use in further investigations which are being made. . . .

. . . . . .

Children are born into institutional life and for that reason accept their inheritance. Does there ever come a time, at least for some of them, when they question the value of these social heirlooms? Such a time does come to some, perhaps to a great many more than we think. I have thought that curves of the ages of children in various institutions would help to determine this question.

Ten charts were presented, showing the ages of children in common schools, Sunday Schools, the Indiana Reform School for girls, a Boys' Club, the Central Y. M. C. A., of Chicago, a chart showing ages of juvenile criminals, and charts showing investigations of reaction times.

So far as I have examined them, all the studies of children extending over a period of from 5 to 6 and 16 to 17 years, show an interesting break in the curve at pubescence. . . .

Things of great import have always found their way into literature. References to the boyhood and girlhood of the times are frequent. . . . In *Little Women*, into which the author probably puts a good deal of her own life, Miss Alcott says of one of the characters: "I think she is growing up, and so begins to dream dreams, and have hopes and fears and fidgets without knowing why, or being able to explain them." Again: "Rich people's children often need care and comfort as well as poor. Some are naughty through mismanagement or neglect, or some have lost their mothers. Besides the best have to go through the hobbledehoy age, and that's the very time they need most patience and kindness. People laugh at them and hustle them about, try to keep them out of sight, and expect them to turn all at once from pretty children to fine young men. They don't complain much, plucky little souls, but they *feel* it. I'm especially interested in such young bears, and like to show them that I see the warm, honest, well-meaning boys' hearts in spite of the clumsy arms and legs and the topsy turvy heads."

"Incontestably the most remarkable and momentous epoch in the life of a human being," says Dr. J. Crichton Browne, "is puberty—when rapid growth takes place, when new physical characteristics are assumed, when powers previously potential become active, and when the two sexes diverge more rapidly than hitherto in bodily configuration and mental traits."

We can never have a scientific pedagogy until it is based upon careful studies of each epoch of Child-Life. Let me make an earnest plea in behalf of the tabooed period of childhood. It is not a study of awakening sexuality, but an

investigation into the psychic and spiritual development as a result of the appearance of the last and one of the most fundamental and powerful of the bodily functions. It is a period of growth essential to life, as worthy of study as any other period. Pubescence stands to the adult life as infancy stands to childhood; it is the beginning of the second and broader life. Its study should attract men and women as noble in purpose and as pure in motive as the study of innocent babyhood. It may be more difficult but it is none the less necessary. Along with this development comes an influx of new inheritances which too often find a poor puny child fit only for their slave. If such children ever need help from parents and teacher it is at this time.

A REPORT ON THE MEASUREMENTS OF THE SENSORY AND MOTOR ABILITIES OF THE PUPILS OF THE CHICAGO UNIVERSITY PRIMARY SCHOOL AND THE PEDAGOGICAL VALUE OF SUCH MEASUREMENTS.

FREDERICK W. SMEDLEY.

The report which I am asked to make this afternoon is based on an examination of the sensory and motor abilities of the pupils of the University Primary School. This little school forms a sort of a pedagogical laboratory where the students of pedagogy are investigating such questions as the correlation of studies, the psychological bearing of the different branches, and the adaptation of the material from the different sciences to the needs of primary pupils. The tests were made in the psychological laboratory during the latter part of the winter quarter by Mr. A. A. Wood and myself.

While making these tests I was frequently questioned by those interested, and, as these questions usually began with a "Why" instead of a "How much," I have been led to believe that the general interest lies in that direction. This will account for the lack of figures that such reports usually contain.

Measurements were taken in sight, ascertaining the visual acuity, testing also for astigmatism, color discrimination, sensitiveness to light, power of co-ordinating the eyes, and judgment of division of length by sight.

In hearing, the auditory range and discrimination of pitch were tested.

In feeling, tests were made determining the minimum of discernible pressure, the span of double touch, discrimination

of weights, using active lifting and passive pressure, and the ability to discriminate different temperatures.

Smell and taste were tested by determining the pupil's ability to detect different solutions.

Besides these sensory tests motor measurements were made of the strength of the grip, and also tests in reaction time.

In addition to the above tests, anthropometrical measurements were taken in connection with the gymnasium. In fact, so many measurements were taken that one gentleman was led to remark that the children were in danger of becoming shop-worn through much handling. But let me say right here that I believe that these sensory and motor tests afford exercises of genuine educational value to every child who undergoes them. Incidentally he learns something of the physiology and psychology of the senses. His power of attention and introspection are trained while he tries to beat in what to him seems an interesting game. But, of course, these tests are productive of most benefit to those who have sensory defects, in revealing these defects to parents and teachers so that the faults may as far as possible be corrected and overcome.

All our knowledge comes primarily through the senses—"the five gates to the city of Mansoul," as Bunyan called them. A defect in any of these senses not only shuts the child out from many of the pleasures of this world, but it warps and dwarfs his entire mental growth. Not only are the perceptions gained through defective senses likely to be defective in themselves, but all knowledge built on such perceptions is likely to be defective also.

While the chief interest and value of the results of these tests come to the teachers of the pupils from a comparison of the individual measurements, yet I believe that there are some general results and some special cases that may be mentioned in an impersonal way, which, on account of their pedagogical bearing, will be of interest to all.

In testing the visual powers, two children were found with defective eyesight. One of these was troubled with astigmatism. The students in the class in general pedagogy,

who were observing the work done in the school, had noted numerous phonetically mispelled words in his written work, and had commented on the peculiarities of these errors. These mistakes in spelling were undoubtedly due to his defective vision. Here was a bright boy guessing at the world from the glimpses he got of it through imperfect vision. He has since been provided with spectacles, and a general improvement in his work is noticed. Besides this, he says that he is no longer troubled with headaches and pain around the eyes as he formerly was.

A great difference was found in the hearing-power of the children. Three were found with hearing quite defective. Of these one was just recovering from severe illness, to which his deafness was undoubtedly due. Another has the appearance of being a dull boy at times, as is the case with so many childred with defective hearing. Front seats and a little pains on the part of the teacher, to be certain that she is clearly understood, is very helpful to such children. The third child is extremely hard of hearing, so much so that the stop-watch and tuning-fork were entirely inaudible. Her extreme deafness has caused her to be almost dumb. By the use of the laboratory clicker in the place of the watch, we were able to learn that the hearing in one ear was much better than that in the other. This knowledge will prove very helpful to her special teacher, who is trying to teach the girl to speak plainly, as it will show her which ear to speak into when she wishes the sound to be clearly heard. The catarrhal inflammation in the ears of one or two of the pupils would suggest to the teacher that they should not be exposed to a cold draft. Such children should not be seated by an open window.

In the tests of feeling, the different ways of measuring showed widely different results. The simplest measurement, and one commonly used, was the determining of the initial of sensation, that is, finding the smallest possible weight whose presence could be felt by the subject. The results differed widely with the different individuals. This was partly due to the difference in the thickness and texture of the cuticle, but more especially to the difference in the size of the little hairs which project from nearly every part of the body.

These act as levers for pressing upon the nerve endings. Those with the coarser hairs seemed much more sensitive to pressure. One boy could detect the presence of a single milligram weight resting upon the centre of his forehead, while another could barely detect the presence of a fourteen-milligram weight similarly placed. The tests with the æsthesiometer showed less variation.

In testing taste the children were found to vary much more in their ability to detect sweet and salt than in their ability to detect bitter. The senses of smell and taste do not ordinary receive training at school; but in this school cooking is taught, and so these senses come into play.

And, too, the results of the tests of strength as shown by the dynamometer are very helpful to the teacher of manual training in knowing what tasks to assign. It is well known, too, that strength is to some extent an index to health and vitality; and, as such, a knowledge of the pupil's strength is important to a teacher in assigning mental tasks as well as physical labor.

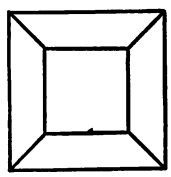
The tests of muscular control and reaction time assist in showing how much and what kind of muscular exercise the pupil is able to perform, and the degree of exactness and accuracy to expect from him in such work. Such tests tend to show the occupations for which the child is naturally fitted. Thus, one whose reaction time is short and whose muscular control is good would be well-fitted for becoming a shorthand writer or telegraph operator.

Running parallel with this investigation, the tests were applied to adults to see how the child differs from the grown up man or woman. In general, the child's senses proved more acute than those of the adult when the mere matter of sensation is concerned; but, as soon as education can come in, the adult tests ahead of the child. Take the simplest of the sensations—that of touch; when this sense is measured by the initial weights, or the æsthesiometer, the child stands far ahead of the grown person; but when touch is tested by the ability to interpret sensations as in testing the fineness and texture of different fabrics by touch, the adult is ahead of the child.

The hearing of a child, as tested by a watch ticking, is above that of the grown person, and yet the adult's power to hear the words of a spoken sentence is beyond that of the child.

It is generally thought that in sight at least the adult is ahead of the child in sense acuity, but here I think that the fact that vision has been tested by letters that are more familiar to the adult than to the child has brought about the above opinion, although certainly there is less difference in sight than in any of the other senses. It does not take very accurate, clearly defined sensations to enable us to recognize that with which we are familiar. The person whose eyes are astigmatic often surprises us with his apparent visual acuity. Habit and experience enables him quickly to interpret his faulty sensations; but the many errors he makes in this interpretation suggest to us that his vision is defective. So the adult readily interprets dim impressions which the child could not so fully appreciate.

As Kant long ago pointed out, the mind is active in receiving its impressions. To show how we project past experience into a sensation let me call your attention to this figure. You may look upon this as a picture of a picture frame, or you may see it as a truncated pyramid with the small end projecting towards you, or you may conceive yourself as looking into a box or dish with the small end turned from you, or you may seem to be looking through a square tunnel. The mind habitually enriches and interprets its sensations by aid of its past experiences, and to this power and habit is undoubtedly due much that has given rise to the belief that the sense acuity of the adult is above that of the child.



Now one word as to the benefit afforded a teacher who takes such measurements. Teachers often look upon psychology as a science which will do away with all poor teaching. But a knowledge of psychology that is to be useful to a teacher in her daily classroom work must be thoroughly assimilated and become an organic part of the teacher herself, so that she may use her knowledge as naturally as she breathes.

Such is not likely to be the case with knowledge gained from the text-book alone, but is far more likely to come from a knowledge gained from observation and experiment with children. And these tests are, I believe, a suitable beginning for a teacher who is to develop an organized, assimilated knowledge of child psychology and become a trained observer of children.

And let us hope that the schools of the near future will be equipped with such teachers, teachers who, better understanding the natures of the children, will better know their needs, and be better able to provide for them; and that in those schools pupils will not be promoted simply on account of their having remembered the words of the answers to stated questions, but that health, strength, quickness and accuracy of intellectual activity, and the acuteness and education of the senses will determine, in part at least, the child's fitness for higher and harder work.

THE DEBT OF ART TO CHILDHOOD.

CHAUNCEY P. COLGROVE.

There are many interesting biographical facts suggested by this topic. There have been poets who have "lisped in numbers," who, like Browning, wrote poems at four, or Dante and Tasso at nine. Cimabue, Giotto and Raphael were all child-painters. Mozart played difficult pieces at three and gave concerts at six. Beethoven composed sonatas at twelve.

But it is not my purpose to dwell on the biographical phase of the subject.

No one who thinks can look into the face of a little child and not ask Carlyle's double question, "Where and whither?" Around the birth of the race has gathered a mass of fable and of myth. The birth of every child suggests the old question, renews the old mystery. For the child represents undifferentiated humanity. Some one has said no form is more perfect and beautiful than that of the human child, unbent by toil, unformed by fashion, unsullied by sin. No sound is sweeter than his cooing and his laughter; or more pathetic than his helpless cry in the dark. No thought is more inspiring to creative art than his helpless innocence, his simple faith, his limitless possibilities.

In art nothing is more fascinating than the Eros, or Cupid, of the Greek artists, and the Christ-child of the old Italian masters. In literature, what sweeter picture can you find than Browning's description of the children in the "Pied Piper of Hamelin?"

> "There was a rustling
> Of merry crowds justling;
> Small feet were pattering;

Little hands clapping,
And little tongues chattering,
As out came the children running.
All the little boys and girls
With rosy cheeks and flaxen curls
And sparkling eyes and teeth like pearls,
Tripping and skipping, ran merrily after
The wonderful music with shouting and laughter."

But artists have not attained such ideals of childhood suddenly; they are the growth of ages. Our way of looking at the child as an individual, with rights of his own, differentiated from society and even from the family, is one of the latest results of human progress. In the early days of art, children were just little animals—the ideal of the artist being a purely physical child.

When Christianity triumphed over paganism, children came to be regarded as little men and little women, with all the thoughts, sorrows, cares, and even sins of grown-up people. But the tendency in modern art, especially in the present century, has been to recognize the child's individuality — to portray children in art and literature as just little children, thinking as children, speaking as children, and understanding as children.

All I can hope to do is to touch a few points in the growth of this artist's ideal of childhood.

Mr. John Fiske states that civilization on its moral and æsthetic side has grown out of the prolongation of the infancy of the human being. This prolongation of infancy necessitates greater care of offspring by the parents, especially the mother, and greater stability of family ties. For the child, it means greater sense of dependence, greater faith, greater educability and possibilities.

In the "Monist" for April, Professor Le Conte says: "Before the development of speech, the most fundamental characteristic of man, there must be the dim perception of relations as relations, and the most fundamental relation, that of mother and child, must have been most potent in shaping language." Art thus grows out of man's emotional nature, and represents the contribution of the *feelings* to civilization. So that we are justified in saying that the mother was the

first artist. Her lullably was the beginning of music and of poetry. Sculpture and painting may have their origin in her instructive efforts to "please the eye and busy the hand of her child," and thus the artist in every age has been in closest sympathy with childhood; for to be an artist one must have the mother's heart. Therefore we can understand why the creative artist has found his most persistent ideal in the child.

In sculpture and painting these ideals of childhood have crystallized in two immortal child forms — Cupid and the Christ-child.

The first is represented near his mother on the old decorations of the Parthenon, accompanies the "Golden Hours" that throng around the chariot of Aurora, flies on numberless errands of the gods, bearing torch and arrows. He is the symbol of Love, but he also does duty as the favorite adornment in decorative art. He is found on old Greek and Etruscan vases. He is chiseled among vines and buds, and everywhere adorns the walls and ceilings of the houses in the old buried pagan cities like Pompeii.

Yet, judged by our standards, Cupid is not a real child, or, rather, is only half a real child. He represents only a physical childhood. There is nothing in his face or form to suggest the spiritual side of life, its mystery, its possibilities. He is only a fat, dimpled, playful, curly-headed infant. Such an ideal of childhood was born in minds in harmony with the physical world — minds undisturbed by moral struggles and painful questionings concerning a future existence. One writer says: "That state of humanity that produced Greek art was the healthy, ripe childhood of the race, where all the faculties have come into healthy activity, and the presentiments of decay and death have not crossed with their shadows the sunshine of life." The philosophy of Socrates and Plato, and the teachings of Christ had not yet revealed the truly moral man.

To the Greek artist, therefore, the child did not suggest what he does to us; there was very little inspiration, hope and the boundless possibilities of life, little of the future, not much of the individuality, nothing of immortality and of Deity manifested in the form of a child. Mr. French, the director of the Chicago Art Institute, who kindly answered my numerous

questions, states that the Greek artists are generally esteemed to have failed wholly in depicting childhood. To them the child suggests (1) the most beautiful form for decorative art, and (2) the most perfect figure for the embodiment of Love.

In modern art the symbolic representation of Love, as the child Cupid, has been more generally adopted than any other figure in Greek art. It is surprising to note how often the modern sculptors, like Thorwaldsen, have used this figure. Mr. Scudder says: "It would seem that in fastening upon childhood as the embodiment of Love, the ancients as well as their modern heirs were bent on ridding life of conscience and of fate —upon making Love to have neither memory nor foresight."

But to the modern artist the child has suggested far more than a symbolic representation of Love—far more than mere physical beauty and a conventional decorative form. A spiritual element has entered into the artist's ideal of childhood revealing a whole range of new ideas and emotions. Much of this new ideal is due to Christianity, for the Christian religion "laid upon childhood the crown of Deity," and its central fact is God incarnate in the Babe of Bethlehem, human as well as divine, child as truly as Christ, infant as well as Savior. On its human side it was to be the mission of the infant to teach that poverty may be glorified, greatness proved through service, victory won by suffering, and that the proud and the wise may learn both humility and wisdom from a little child.

The history of Christianity is carved and painted in its Madonnas. The first of these that have come down to us hardly represent a real mother and child. They are rather symbols of faith. The Virgin looks like one who has "mothered all the sorrows of earth" and the child is no universal type of childhood. His whole attitude is stiff, and his figure ill-proportioned, with huge head and emaciated limbs. He forms a most striking contrast to Cupid. No comeliness, but on his face is that pathetic old-man look that makes you stop sometimes and buy a paper that you do not want of some crippled baby newsboy. In fact, the whole appearance of the Christ-child in those early pictures suggests the "man of sorrows" and the shadows of the cross. It suggests, too, the era of martyrs, the bitter struggle of 300 years between Christianity and pagan-

ism, the fierce fires of persecution kindled by a Nero or a Diocletian. It suggests the utter contempt of physical beauty, the asceticism and all the gloomy ideals born in the catacombs of Rome and the deserts of Egypt—ideals of Dante so powerfully expressed in the Inferno when he peopled the abodes of the lost with childish forms.

Christian art finding expression (1) in sacred music, (2) in church architecture and decorations, and (3) in the illustration of manuscripts and representations of saints was hampered at first by set forms and traditions. But with Cimabue painting broke away from these restraints and faced once more towards nature, and first of all towards a more human childhood.

Cimabue, the "Father of the Italian Renaissance," made a bold but devout attempt to unite the dignity of the divine with the truth and beauty of infancy. Vasari says that when Cimabue's masterpiece, the Madonna of Santa Maria Novella, was finished, all the men and women of Florence gathered at his house to see the picture, and that it was carried in triumphal procession to the church. The chief difference between Ciambue's picture and the orthodox Madonnas of his day is not in the mother but in the child. He is given a more beautiful form, a shapely head, sweetness of expression, greater childlikeness. Thus the first movement of the revival of art was a return to nature in the ideal of a child.

Ciambue's pupil, Giotto, carried the new conception of the Christ child still farther, and in Raphael the transformation became complete. The physical child of pagan art and the spiritual child of Christian art blend in Raphael's later works, like the Madonna of the Goldfinch or of Di San Sisto; and in a universal ideal of childhood, the classic and the Christian world clasped hands.

In Raphael's pictures the Madonna is a human mother and not a mere symbol of faith, and the child has become the sign of an ever-present childhood in the race, the symbol of home and domestic happiness—the recognition of the child as the heart of the family and a token of that divine hope in the heart of every true father and mother that their child may realize a nobler, richer life than theirs and prove a bless-

ing to the world. Truly, "It is significant of the Italian Renaissance and of every great new birth in the world's progress that it turns its face towards childhood and looks into that image for the fullest realizations of its hopes and dreams."

To-day we find the influence of childhood upon art best expressed in literature. As a matter of fact it is only in the present century that the child has become a figure in literature. In our own literature, William Blake, the English artist and poet, preceded Wordsworth in recognizing the child as worthy of a place in literature. His artistic illustrations of his poems are exceedingly unique. He represents children in every conceivable situation, riding on dolphins, serpents and birds; bursting forth from buds and tiny shells; perching on clouds and rainbows—common enough now, but not so before his time. He wrote as a child to children. His best book, "Songs of Innocence," was published in 1789. The only copy I have seen is in the Newberry Library of Chicago. A few lines from the introduction will give some idea of his style of imagery.

"Piping down the valley wild,
Piping songs of pleasant glee,
On a cloud I saw a child,
And he laughing said to me:
'Pipe a song about a lamb!'
So I piped with merry cheer.
'Piper, sit thee down and write
In a book that all may read.'
So he vanished from my sight,
And I plucked a hollow reed,
And I made a rural pen,
And I stained the water clear,
And I wrote my happy songs
Every child may joy to hear.'

Some of his poems are, "The Little Boy Lost," "The Little Boy Found," "A Cradle Song," "Infant Joy," "The Little Vagabond," and "Infant Sorrow." All his poems were illustrated with his wonderful creative designs. So that to this humble poet we owe very largely that distinct class of both art and literature addressed specially to children.

Wordsworth and the other poets of the Lake School have given the child a permanent place in poetry, George

Eliot and Dickens in fiction; Hawthorne in Wonder Book and Tanglewood Tales has Yankeeized and infantized the old Greek myths, and Hans Christian Andersen has woven for childhood the sweetest visions of fairyland. Thus the curse has passed away from childhood. In every department of art his personality is recognized. He is not merely one of the family but is a distinct individual, with rights, thoughts, and feelings peculiarly his own.

Teachers are more and more realizing the value of art in the form of music, statutes, pictures and literature as an educational means. In many schools today art is a powerful instrument both in the training of the hand and in the inspiration which it gives to mind and heart. It was suggested to me by Miss Josephine Locke, Supervisor of Art Instruction in the Chicago Public Schools, that childhood owes a debt to art as well as art to chlldhood. To realize the truth of this, one need only visit some of the Chicago schools, especially the Forestville School, or inspect the art work of the children in the Cook County Normal.

Concerning music I have said very little, not because musicians have failed to catch inspiration from childhood, but because the musicians here are to give you back this inspiration in song. There is an element of the sensuous even in the highest production of genius when expressed by means of brush, or chisel, or language, but music, apart even from language, has power to stir our deepest emotions.

Pyschologists tell us that the sense of touch is the fundamental sense, from which all the others have been developed. And I sometimes think that music is the fundamental art out of which all the others have grown. It is called the universal language. Poetry is its child. The cooing of the babe and lullaby of the mother are its earliest forms. A Thomas orchestra is all the sounds of nature civilized and harmonized into exquisite sweetness. The early Greeks called music the language of the gods, and comprised nearly all of the intellectual education under the term. And here, too, so their legends tell us, it was a child who inspired the instrumental art, the god Hermes, when an infant, having fashioned a sea-shell into the first lyre.

As a summary I suggest—

1. Creative art has found in childhood its most inspiring and persistent ideal, and every birth of art has been through a return to this ideal.

2. Greek art gave us a perfect ideal of the physical child, and Christian art infused into the physical art-child the spirtual element, the element of possibility and worth as an individual. The type of childhood formed by this union, a little less lofty, a little more real and natural, is the child of our literature and art today.

3. While childhood has been a constant inspiration to art, the artist has done much for the child. He has emphasized and idealized the lovable and beautiful traits of childhood, and thus stimulated parental love. The artist has helped materially to rob the schoolroom of its gloom and has in modern times added a source of unfailing charm to text-books, through music and literature, sculpture and painting. Art has been a powerful means in destroying the doctrine of the "holiness of ugliness," in breaking down theological and educational dogmas concerning the total depravity of childhood, and has created for the child himself a world of beauty and enjoyment.

4. Music is the fundamental art, and every normal child possesses in some measure the musical ear.

It may be well also to call attention to the fact that there have been a few educational artists, and that every such one, whether a Pestalozzi, a Froebel, or a Horace Mann, caught his inspiration from childhood. One of the encouraging signs of the present is the fact that teachers are turning their faces childward, are giving more earnest attention to the living factor in the problem of education. And to me it is a significant fact that this great movement in Child-Study has come so soon after the mother instinct and the artist instinct, and through women teachers, has been utilized in school education. With men and women teachers equally interested in this movement, it would seem that Child-Study bids fair to become one of the few movements in history in which an artistic ideal and a scientific spirit have from the first been harmoniously united.

WORDS OF WELCOME.

VICE-PRES. ORVILLE T. BRIGHT,

COUNTY SUPERINTENDENT OF SCHOOLS, CHICAGO.

It gives me great pleasure in behalf of the teachers of Cook county, whom I represent, to welcome the Illinois Society for Child-Study to this meeting. I think that this movement, which has been so recently inaugurated, and which is fast assuming so great proportions, is probably the most significant of any that have occurred in this country in connection with education. To me the most significant factor is the fact that it is permeating all grades of teaching, from the kindergarten to the university. I thought, as I came home from the great meeting that we had at the University of Chicago this afternoon, of the significance of that meeting. The holding of such a meeting on such a subject in a university is a thing that I think I am safe in saying could not have occurred five years ago.

The sympathy that this question of Child-Study is calling out, developing in the different departments of our educational system or systems in this country, is something magnificent. When the kindergarten teacher, the primary teacher and university presidents can engage in a discussion of the best means for the study of children and for the education of children, it seems to me that the outlook for our educational work in this country is indeed encouraging.

To proceed with our program, it gives me great pleasure to introduce to you Dr. Joseph Jastrow, Professor of Psychology in the University of Wisconsin, who will talk to us on "The Statistical Study of Mental Development."

THE STATISTICAL STUDY OF MENTAL DEVELOPMENT.

PROFESSOR JOSEPH JASTROW,

UNIVERSITY OF WISCONSIN.

Let me say, before proceeding with the main topic of the evening, that I came here with the understanding that I was to occupy a very small place on the program, which was to be mainly occupied by others. As I seem, however, to be the mainstay of the evening, owing to others being the "main stay-aways," it falls upon me to say more than I originally intended. Let me also say that I should have been very glad to have made more systematic and elaborate the few suggestions I have to offer, were it not that I have been forced for some time to husband my mental energy very carefully. This will therefore be a somewhat rambling talk upon the general topic, "The Statistical Study of Mental Development."

Child-Study to me means a phase, and, of course, the one important phase, of mental development, which is the topic of those interested in meetings like this. From our interest in these processes of growth of the faculties comes the insight that man, of all creatures, is the one which begins life in the most helpless of conditions. That absolute helplessness is his strength. John Fiske has well said: "It is babyhood that has made man what he is." When we consider what this helplessness means, we find that it is the prelude to a long and important series of stages of development. The more the infant—and I use this term in more than the human sense—the more the infant knows, the more he can do at the outset

of life, whether the infant of a dog, or of a horse, of a man, the less will that infant be able to do when mature. This is a general fact—a biological law. The more we inherit from our ancestors, the more we have to carry at the outset, the less are we able to develop for ourselves. The very possibility of acquiring all the experiences which are alone given to man, requires his being for many years cut off from the use of powers which are to mature much later; and this is the source of his ultimate strength.

The realization of this fact is somewhat modern. It comes in the wake of a large movement which characterizes our century, the study of evolution. Evolution means development. The essential interest in the study of the child is a study of the developing being. I have therefore chosen to speak to you of mental development. I wish to limit myself to one particular phase, so I have called it "The Statistical Study of Mental Development."

By "statistical study" I have reference to the fact that in order to study mental development, we must study the development of a large number of individuals. That, of course, is quite obvious. The point I wish to emphasize is that the study of mental development, as of sociological matters affecting our national growth, is of very little interest if we take into account but the single individual, and can only be carried on by taking individuals collectively. This is why we have the national census and similar statistics. And it is just in this sense that the study of mental development is essentially a statistical study. Some of the popular notions of statistics are very peculiar: Some persons believe that numbers never lie, and others, that they always do! Numbers are very elastic, and can be made to tell the truth, or can be made to lie. There is no very great virtue in the number itself. The virtue of a statistical method lies in the logic back of it. It takes a statistician to interpret statistics. It is only by analysis of the ceusus tables that they begin to tell us something about our national growth. We need trained students—we may call them psychologists, educationalists, students of Child-Study — to properly interpret the facts which may be gathered in our school rooms.

Another notion of statistics is that they are merely a mass of stupid figures, or that they tell what one knew before, or something one does not believe anyway. I feel that this is hardly a justifiable view. It is entirely true that we must always be prepared to find our statistics not so fruitful as we had expected. The scientist is always prepared to find a relatively small result. The results may be negative when he had hoped they would be positive. But what we seek, in these statistics, is the truth; and if the result does not bring us glory, it is the truth none the less. The other notion of statistics which I wish to combat is the idea that we are dealing with facts extremely regular and monotonous. This notion is well illustrated by the story of a certain traveler, who had heard that the death-rate of a certain town which he was approaching, was 365 a year, which would give an average of one death a day. Before entering the town to spend the night, he sent a messenger on ahead to ascertain if any man had died that day, as a precaution against his own taking off. According to this notion of statistics they merely tell just how many things of this kind go on and how many of that. Now the study of statistics naturally tells us in a systematic and arranged form the same facts which we can often guess, but of which we cannot be quite sure. One phase in the progress of science is measurement. But a great many things cannot be accurately measured. Their variability is their very essence. We apply the method of statistics to phenomena which in themselves are extremely variable, and we begin to find in them something of great value.

From the study of children, not of the single individual child, what can we expect to learn? The fundamental and popular interests lie in precisely opposite directions. Each one of us personally is interested in some particular child or group of children, and we do not care very much about what Child-Study may tell us about other children, if only it will tell us something about our own children. This is a very natural attitude, but it is not a scientific attitude. The practical application of statistics must be kept somewhat distinct from the theoretical basis on which the study rests. There is a statistical study of mental progress, whether we apply

it wisely or not. We are very prone in this practical age and extremely practical country to test the value of things by their success. We not only say that nothing succeeds like success, but we believe it. The practical test is so often applied that we lose sight of the fact that a great many things which seem to be immediately practical are, after all, very short-sighted, and in the end the very reverse of practical. When first it was suspected that certain parts of the brain were the centers for certain mental activities, it was the practical man, always ready to apply knowledge which is only half understood, who hung out his placard and was ready to disclose the present, the past and the future on the basis of a superficial examination of the cranium. That was science applied in a very drastic manner, and it was a very dangerous thing.

Why we should feel so strongly the necessity of having knowledge practical is obvious enough: we require it to tell us something about ourselves. We must frankly face this attitude in making a plea for the statistical study of mental development. At the very outset of such study, one encounters these questions: What is the good of it all? What are you going to do with it? It is true that we are working to gain knowledge that we are not quite certain of being able to apply immediately. It is similar to mounting to higher ground. One step does not increase our view materially, nor another step, but each one does broaden the prospect a little, until finally we mount to the top and sweep the horizon, seeing things in broad and clear relations; and then comes the application. Such is the relation between theory and practice.

When we look back upon the history of medicine, we find that such is the nature of advance that has been made. Each generation of educators, as well as of physicians, has a very practical problem to perform. Something *must* be done with the growing child. We must not suppose that this necessity at all justifies our feeling disheartened because we do not know many of the general truths upon which this doing something depends. We must be contented to guide our practice judiciously, and to build for future genera-

tions as well, thus broadening theory and practice at the same time.

STUDYING CHILDREN IN GROUPS.

In taking up a study of this kind, there are a great many problems to be solved, so many that it seems almost hopeless to decide where to strike the first blow. As the student's ideas gradually take shape, he sees that there are laws with regard to childhood that are fairly universal, and it is these which he first strives to make his goal. One such law is the distribution of ability. We recognize at once that men are not, as our Constitution says they are, born equal, but very unequal, and it is this inequality that makes life worth living. Being born equal is only possible where every individual is equally low in the plane of life upon which he happens to enter. The higher planes of life are characterized by a greater diversity. At first this diversity seems a mere chance. We study more closely and observe that it follows a certain law. There is a grouping about an average; so we speak of the normal child, the normal individual. Having determined some point as the normal, we group about it those falling below, those gradually approaching, and then those above, and, finally, those far exceeding the normal, the numbers growing fewer and fewer as we recede the farther from the normal. Mr. Galton has ably applied this principle in his study of genius. In any large body of living beings, a large number of them are grouped very closely about a certain average. As some one has said, there is a great deal of common work to be done in this world, and there are a great many common persons to do it—a rather fortunate thing by the way. This again indicates the massing of individuals around an average. What is true of adults is true, though in a less degree, of children. We recognize that there is a more or less normal development of the child. To ascertain what that normal development is at different stages, it is necessary to resort to statistics. A few observations will not give a result of this kind; it requires the study of large numbers. In studying a large number of children, we get a presumably normal curve. This is the first aim of the student of mental development. He attempts to determine a normal law for the physical processes of growth,

for the mental processes of growth, for the order in which the senses unfold, in which the various movements become possible, the order of the awakening of different faculties, when and how these mature in the developing child, how they develop, how they at last expand to their fulness in mature life,—and all this not merely for each faculty separately, but for the several powers in their relations to one another.

A further line of investigation is the correlation that exists between the various faculties. This is a point of very great importance, as well as of great difficulty. What, for instance, is the relation between physical and mental growth? What is the relation of the development of the body to the development of the mind? Are we going to find, on the whole, that the children who are the best nurtured, who have best muscles, are also superior in mental work, or the reverse? Again, we find one group of children particularly apt in all things which demand imagination; they are poetic; but they are not, perhaps, very apt in those matters which require persistent and minute application—a high order of drudgery. Having distinguished two such groups we naturally inquire what physical traits go with each group. If we once knew this relation then we should have some basis for so arranging our courses of study as to develop in the various children the forms of mental processes in which they are defective, and also be able to know the pedagogical value of the different forms of studies. The normal development and the correlation of faculties I would therefore emphasize as the two important phases of this work of Child-Study.

You have doubtless heard of the English clergyman who made the statement at a meeting that Americans were not so tall as Englishmen. Several tall Americans happened to be members of his audience and rose one after the other: the first was over six feet in height, and the second and third were even taller than the first. Of course, the clergyman didn't have much support for his statement, but he had the statistics, and the statistics were really correct. We not only expect, in this work, but actually require, a result as the general average,

which is contrary to individual cases. By studying large numbers we obtain a group, and, having obtained a certain group, we sub-divide it. We study men and women separately, and then little men and little women. It is surprising to note how soon and how persistently differences in the development of the two sexes appear. These interesting modes of development have in part been studied, such as development of taste in color, music, drawing. We find that in many respects the development of girls is parallel with the development of boys. We may divide our facts in many other ways, comparing children from town and children from the country, children from better-educated homes and those coming from ignorant homes. We can ask almost as many forms of questions as we have interests in the study of children.

I wish to call your attention to another point, and that is, how we eventually reach the individual child? We reach him only in a very indirect way, and the more direct influencing of the individual child, will always remain the problem of the practical teacher. It is wise for the one who is making a plea for a certain cause not to claim too much. There is always something left for some other method and some other study. It is obviously true that judgment, insight, discernment, a loving form of observation, will always have their place. No one hopes to take all the life and interest and feeling out of Child-Study and simply put down the bare facts in cold numbers. There will always be a place for the study of individual children by other than the statistical methods. In fact, these other ways must always supplement the teaching of statistics. But if you wish to ascertain how your child differs from the normal and in what respects, and if, finding your child deficient in a certain respect, you desire to encourage the development of that particular thing, then you must fall back upon the statistical study. In physical culture this is already done. By having a complete series of tests for individuals as we have in college gymnasiums, we are enabled to do something for the individual. The director of physical training prescribes certain exercises to bring up defective physical development and further a well rounded

development physically. We cannot hope, for the present at least, to have so complete a method for mental development as for physical development.

My only other object in the present discourse was to give some practical tests and illustrations of what this statistical study may mean. For that purpose I have arranged some apparatus, which was sent down from the Wisconsin laboratory, and will give some tests to-morrow morning, and thus illustrate the methods of finding out something about the sense development, the motor powers and intellectual processes of children. I thought it better not to attempt to describe these in the absence of material things. You will see, for example, what may be done with regard to the development of the hand and eye, the powers of the eye for accuracy in form and color sense, æsthetic selection of colors, rapidity of movements, accuracy of movements, power of controlling movements, rhythm of movements, etc.

In concluding, I wish to say a word in regard to the relation of the psychologist in this matter to the educationalist. The psychologist is primarily interested in adding to his own information in regard to the human mind. It must ever be his main interest to develop his own science, and he takes the development of children as a method of study. He also uses many other methods, the study of animals, the study of disease, etc. But this does not deter him from taking, secondarily, an interest in the same line with the pedagogue, whose main interest lies in an improved method of educating children through a systematic study of them. We all know that in ancient times knowledge began with the study of things far removed from ourselves—the stars, sun, moon. Gradually the earth itself was taken up and studied, the material of the earth, its composition, a primitive physics and chemistry. Very much later, the structure of the earth was studied; geography, and then geology appeared. It is only within a comparatively recent date that we find a study of the life itself, the living animals of the world. There, again, the interest was first centered in outer forms of life. It is only within our own century that a study of the habits, of what these beings do, came to be a permanent part of human knowledge;

and then, last of all, we study man, and even then we try to study him first in his fully matured form, in his most difficult, complicated aspect. Finally we reach the dominant center of interest—the child—which is father to the man, and the proper study of mankind.

SIGNIFICANCE OF INFANCY IN HUMAN BEING.

DR. W. S. CHRISTOPHER.

PROFESSOR OF PEDIATRICS, COLLEGE OF PHYSICIANS AND SURGEONS, CHICAGO.

Among the things brought up in the extremely interesting discourse of Dr. Jastrow, was one which is of supreme interest to me. His statement to the effect that the extreme helplessness of the human infant has been the salvation of the race, is the point to which I wish to call your attention. It used to be said that even the young puppy could do more for itself after a day's existence than a human infant after a month or six months. This is true. It was thought that in this we were in some way deficient, but this is not true. It occurred to John Fiske now at Harvard, then at Harvard, some twenty years ago, that the prolonged infancy of the human species was the factor which had produced the extreme elevation of the human race above the lower animals. It is a very simple proposition. Let us take a series of dogs. The dog of one generation differs from the dog of the immediately preceding generation to a very, very slight extent. It crystallizes into the dog of its ancestors before there has been any opportunity for environment to modify it; so the dog remains a dog. But that the individual who is blessed with an infancy so prolonged that it requires the constant attention of a mother, the individual who is blessed with an infancy so prolonged that it requires not only the constant attention of a mother but of a father, belongs to a class of beings who must be members of a great human family. If the ancestors of such an individual do not perform their extensive and prolonged maternal and paternal duties, then that individual dies, and as a race it becomes extinct—the fittest does not survive. If blessed with a parentage of such a nature that these parents take care of it throughout its infancy, then it does live, it does thrive. It is through this doctrine of the

survival of the fittest that those who existed had this maternal and paternal spirit. They maintain the life in a little thing which was plastic throughout a large percentage of its existence, not only plastic, but amenable to its surroundings. If there is such a thing as plasticity which is not amenable to its surroundings, then it cannot live in modifying surroundings.

I want to differ from Dr. Jastrow just a little bit. It is not merely the extreme helplessness of the human infant which has produced the elevation of the race; it is the prolongation of the period of infancy, the prolongation of its plastic period. There are animals, there are mammals, whose young are born infinitely more helpless than the young of the human being. Take the marsupials, the kangaroo, which rises in size equal to ourselves, greater than ourselves, an animal which surpasses us in physical strength; and yet, at birth, the young kangaroo is but one inch in length! Did you ever see a new born baby one inch in length? No. Nineteen or twenty inches is about its average length. The young kangaroo is born about an inch in length; the young kangaroo is born naked, without hair; it is born blind with its eyes closed; it is born in the most helpless fashion imaginable, because in its prenatal existence there has not been that complicated group of conditions which would permit it to be nourished. After its birth, this most helpless of all mammals is nourished in a most peculiar fashion at the breast of its mother, inclosed constantly in a pouch and kept at that breast day and night. It is even so helpless that it is not able to take this nourishment itself, but a muscle runs from the breast of its mother to the young one, which forces its nourishment. It is a separate life, entirely distinct, but that animal which is one of the very lowest of our animals, that mammal, is born even more helpless than the human being. But how is it located? It is located during that period in such a way that there are no environing influences which could modify it from its parent, to be brought to bear upon it; the duration of its plastic period, susceptibility to environment, is not as great as that of the human being. We wish to modify Dr. Jastrow's statement. It is not the mere degree of helplessness which determines how far the animal will rise, but the duration, not in

years, but in the percentage that its plastic period is of the life history, and there is no animal which approaches, in this sense, the human animal. There is no animal which comes anywhere near it at all. As a support of that proposition, remember that this, so far as the mere statement goes now, so far as it has been made by John Fiske, is mere theory.

I had occasion, in conversation with John Fiske, to call up this thing, and he said, 'I have no data to support it.' In the course of my individual work, some years ago, without knowledge of Mr. Fiske's generalization, the same theory appealed to me. It must be true, or that which I was attempting to do was wrong. It must be true, and this conclusion has been reached in my work through a class of observations which I did not want to give as proof, because I wished a greater realization of the proposition. In conversation with Mr. Fiske, I asked him how this idea came to him. He said, 'It came to me through psychological problems, but it is absolutely without demonstrative data.' We do have, however, a few things which uphold it. First, it is a fact that so far as the human being is concerned, the plastic period of that human being, if I may put it so—the modifiable duration of its infancy—is demonstrably greater than that of any of the lower animals. Next, when we come to the lower order of primates, and compare, of this lower order of primates, the chimpanzee with the common monkey, we find great differences. Observations have been made by Wallace, who first formulated the doctrine of natural selection, even before Darwin. Wallace relates that in the Malay Archipelago were born at the same time a chimpanzee and an every-day, common, organ-grinder monkey, which is a very low order of monkey. The organ-grinder monkey, whose scientific name I have forgotten, is of a very low order, while the chimpanzee is one of the highest primates. These two animals were raised together, under similar conditions, and it was found that the little organ-grinder monkey's infant helped itself to everything about it quite independently of assistance while the chimpanzee was still pitifully appealing for help, for food—for everything. It was the victim of a prolonged infancy.

We look to the birds. We find that low order of gallinaceous birds, known as the jungle fowl of India, almost literally without a mother. The maternal instinct of the jungle fowl does not exist. It lays its eggs in masses of dead leaves, and leaves them for the heat of decomposition to hatch. A friend traveling in India collected a number of these eggs for his supper. He said they were very good. But by the time he would get near the last of his half dozen, he would find occasionally that two or three of the fowls had hatched and made their escape. They are extremely precocious, breaking out of the egg and escaping at once. We find then that the jungle fowl gives us a most excellent instance of a low animal being extremely precocious at birth. We know that the extremely precocious child amounts, as a rule, to very little. A true genius is not always a genius in his childhood.

Another point is, if this proposition be generally true, then it must follow that the lower orders of men will be more precocious, so far as their infancy goes, than the highest order of men. One of the lowest orders of man is found in the Andaman Islands. The mother takes care of her child for two or three months, and then throws it to one side to shift mainly for itself. At five or six years of age, these children are out with bows and arrows, and shooting. Of course, this people is not to be compared with us absolutely, because the extreme limit of life with them is much less. They are old at thirty, fifty is extreme old age, and few pass the age of thirty-five. Whether they die because of the peculiar conditions of life there, or whether they die because they have reached the full gamut, I do not know; but the Andaman Islander, the lowest of the human race, is extremely precocious during his infancy.

Last Sunday, in conversation with Dr. Krohn, he told me that he had measured several thousand Indian and negro children, and these figures, which he had partially reduced, showed that at given ages the Indian child had higher stature and greater weight than the child of white parents in this same country. In other words, the Indian child develops more rapidly than does the Caucasian child; the negro child develops more rapidly than does the Caucasian child; and so

we would say that what we expected to be a lower race shows itself, by actual measurements, to be a lower race. Then we will come to the conclusion that our method of judging between two races as to which is the higher, will contain these factors: How rapidly do they develop? What is the duration of their plastic period? How long are they infants? And we will conclude that the more precocious they are in infancy the lower the race.

What is the relation of this subject of Child-Study to general biology? I fear every time I meet with the Child-Study Society that it is running altogether too much to the side of pedagogy alone, that it is looking upon the child as a thing which has a mind, whose mind is to be studied. Let us rather recognize that the great feature, the great element which was brought out by Dr. Hall, was the fact that the child is an entity, that it is worthy of study in all its phases, that it has a physical side, studied more or less, that it has an intellectual side, which has been studied out, or worked out, to a certain extent, and that it has a moral side, the natural history of which is as yet utterly unknown! Now, if Child-Study is to be of any force whatever, it is better to bring these factors into one factor, into one group, than to attempt to study the child from his physical side, from his intellectual side and from his moral side, which are so intimately correlated that it is impossible totally to separate them. For convenience, it is desirable to study the physical side alone, the intellectual side alone and the moral side alone. but we can never separate them. This is shown conclusively by some of the great truths of insanity.

We could multiply in many ways the correlation existing between the intellectual and physical work. Most interesting is something that came out at the last meeting of this Society at Champaign, last year. It has been of great interest to me. You will all recollect, I think, Dr. Krohn's fatigue chart, in which he shows that the child fatigues less quickly at seven years of age than at six years of age, but more readily at eight years of age than at either seven or six! The child at eight years of age does not have the power of physical resistance which a child of six years of age has.

Dr. Krohn did not understand why this should be so. One could not understand it from a psychological standpoint. This chart was made with reference to ability to produce certain movements with a given rapidity; it was the expression or index of the child's total strength. Why does it occur? It is an extremely common fact, as we physicians know, to find in children of that age a dilated heart; a dilated heart whose work has been so great that the poor, struggling heart muscle can no longer accomplish it. It cannot contract with sufficient force to do the work. The individuals become tired, fatigue easily. This is true, and how much it has taught us! We know that the dilated heart occurs at that age. We know that the reason for it is the sudden increase in weight in the child without corresponding increase in size of the heart muscle. We know that the dilation, or tendency to dilation, and fatigue curves, represent the fact that the child must conserve its strength until its heart grows to its work. The psychologist could not possibly understand this until he had consulted the physicians. The physician could not possibly have reached the conclusion that such a condition was common until he had heard from the psychologist, or, rather, from the individual who developed the fatigue curve, and it is only from neurological charts that this could be determined. Therefore, I say, while you are attending to the psychological aspect, to this psychological study, extend your study to biology in its best sense. Each one should know something about this, enough, at least, to understand and appreciate the great biological generalizations such as are expressed in Darwin's 'Origin of Species' and Spencers two books on biology in his 'Synthetical Philosophy.'

THE CHILD-STUDY OF FROEBEL.

BERTHA PAYNE,

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We look to-day upon the psychological expert, as one who, with accumulated skill and knowledge gained in years of wise research, turns an X-ray upon the mind of his child-subject and thus penetrating the film of phenomena, interprets for us the half-revealed, and lays bare the hidden springs of action.

As I understand it, the point of view of the educational philosopher or educational artist and that of the scientific student of child nature are quite different. A difference exists as old as that between inductive and deductive philosophy.

Turning from present conditions back upon the past let us see to which class Froebel belongs. He has been called the seer, the prophet of childhood. Can we retain that title for him and push as well his claim as an investigator in the true sense, one who patiently watches and records all phenomena holding conclusions in abeyance, and setting aside in a measure his pre-conceived theories of life until he has classified these records and allowed them to speak to his reason; to tell their own story to his understanding?

Was Froebel a scientist in this sense? Was he a student of child-nature, philosopher, or dreamer of dreams?

We call him a philosopher, but that he merits the name some deny saying that his philosophy was merely a reflex of the prevailing school of thought of Germany, and not a growth arising from his own contemplation of life, not a unification of his own nature-knowledge and self-knowledge, his original product of reflection.

To this we may say, it is true that he was a student of

Kant, Fichte and Schelling; and this we know because of the notes which he left among his writings, and also because the work which contains his fullest expression of fundamental principles (The Education of Man), bears undeniable evidence of the influence of Hegelian thought.

As to Schelling, he says in one of his letters that a friend who was a student of philosophy at Tübingen loaned him a copy of Schelling's Bruno or the Spirit of the Age, which influenced him at the time greatly; he discussed the principles at length with his friend, whose parting warning to Froebel was "Shun philosophy, it will lead you to doubt and night. Devote yourself to art, it brings life, peace and joy." It is amusing to note Froebel's naive comment upon this half serious advice as he wonders how his friend can possibly hold such a position in reference to his chosen study.

Froebel's essential doctrine or theory of life, as stated in the opening chapters of the Education of Man, is Hegelian, *i.e.*, God rules and controls all things. All things originate in him and partake of his nature. Froebel's pedagogics influence being—since man is of divine origin his highest happiness must be to reunite himself to divinity and hence the aim of education must be to lead to their union. Froebel's claim to originality lies in his pedagogical application.

From this idea of unity in the Source of Creation and unity of law and structure underlying Creation springs Froebel's belief in the objects of nature as instruments of education, revealing law that is operative alike in human and inferior nature, and which is a manifestation of Divine Energy. Here we see plainly how different Froebel's conception of unity in nature and spirit was from that of Schelling, for Schelling's was a unity of identity of matter and spirit, while Froebel's unity was that of Source.

He lays stress on the relation between the laws controlling mind and those controlling matter, and he argues from the analogy existing between man and other forces of nature, the fitness of nature's forms as subjects of investigation and thought, as a means of revealing to human intelligence, through their exhibition of law underlying phenomena, the mirror of laws governing self, and, through pursuit of

self, knowledge leading to a conception of the nature of the Divine essence in which both self and not-self originate.

To this deep-rooted conviction of man's origin and continued relation to Infinite Spirit Froebel owes his steadfast faith in the original goodness of child nature as opposed to its original badness, believing that a child's divine heritage must be stronger than his human heritage of perverted tendency. It was this belief that gave him confidence in the necessity of finding the powers in childhood, knowing that right action must proceed from right instinct—a confidence which was daily reinforced in the results which he saw when spontaneity was encouraged.

Had he left us no other legacy than the impress of this faith in childhood his life would be priceless. This is but a brief glance at the influence of contemporary thought upon Froebel's formulation of fundamental principles. His strength seemed to lie first in his power to grasp these principles, and next in his clear view of them in relation to education, and in his ability not only to see the relation, but to make actual application in the very beginnings of education in the little child.

Whether they are merely borrowed sentiments or not can be determined by the power which the possession of these truths gave him. He was able to ratify his belief as to the nature of the soul, its powers and growth, in his own past experience and in the activities of children about him, and so they must have become in him not mere theories but germinal truths. If from childhood certain convictions were forced upon him through his original powers of observation and reflection, these products were undeniably his own.

His letters show that he was an observant and reflective child, and sought for motive underneath action, law behind phenomena and relation in all things. His strong love of nature and thoughtful bias were strengthened by a solitary childhood and were further intensified during his apprenticeship to a forester in his youth. This love of nature and of the investigation of her phenomena probably inclined him favorably toward the prevailing philosophical schemes, yet the perception begun in childhood of the unity of law underlying the vast variety in creation, undoubtedly did as much to form

his view of the law of unity as did the speculations of Kant, Fichte, Hegel and Schelling. It was his altruistic motive, and the immediate passing over of motive into action that made him more educator than theorist, more artist than philosopher.

Philosophy apart from life seems to have had no charm for him. His views led him at once to closer observation and to planning means for the accomplishment of his aims. To get at the sources of his beliefs we must study not only the education of man but the writings which reveal his own younger life. These give give us an insight into the man's study of nature, as philosophic and poetic, rather than scientific. He describes his keen delight upon the discovery of the law of fertilization and reproduction in plants and his greater delight in finding it to be universal.

He seemed to be able in a measure to trace his own mental history, as all students of psychology have their object of study within and trace the growth of certain ideas from from incident to incident. Then some such moments as he describes stand out with startling clearness and mark eras in the development of a thought. Clearly this introduction is, in a manner, Child-Study, a means which Froebel used continually in his endeavors to understand the needs of his pupils. This seeing the *past* as a *present*, enables him to go beyond the methods and ideals of Pestalozzi, though his debt to this educator was great and he fully recognized it.

While with Pestalozzi at Yverdun his belief in the mother as first educator of her child was strengthened, a belief which later took shape in his beautiful "Mutter and Koselieder," with its explanatory notes. To illustrate Froebel's growth through constant study of the children, I must quote his statement of his own point of view at the time of leaving the school at Yverdun.

He says: "What do the means of elementary education as set forth by Pestalozzi signify? What is principally the object of instruction? To this I should answer: Man lives in a world of objects that act upon him and on which he would act. He must therefore know them according to their nature, their character and their relation to each other. The objects

have *form*, hence lessons on form; *size*, hence lessons on size, and are *manifold;* hence number." He goes on to say, "You see I had in the expression 'outer world' only nature before my eyes. I so lived in nature that art or human works did not exist for me, therefore it cost me a long struggle to make the work of men a subject for elementary culture."

Do you see from this statement what an immense growth there was later in Froebel's outlook upon life and upon the meaning of education? For at this early period *knowing* was the end, no thought of production; no thought of creative power in either industrial or artistic channels. No thought of the strengthening of the idea in expression that later occupied so large a place in his scheme and which he saw from the two standpoints. From his philosophic standpoint man must create, since he originates in God and partakes of his nature as Creator; from the standpoint of experience since, in his observation, making and doing, give happiness and power to the children.

Upon leaving Pestalozzi, Froebel had great apparent success as a teacher, especially in the teaching of number. But he was himself very much dissatisfied with his efforts at teaching language. He felt that he did far more to further the growth of his pupils in their walks and talks in the fields than in any formal language lessons upon *things*.

Because of this dissatisfaction he went again to Pestalozzi, this time taking with him three boys that had been placed entirely in his care. But still he felt the emptiness of the language lessons, for he thought the essence of the subject was lost, as far as the children were concerned, in the consideration and reproduction of forms. He himself regarded the study of language as essentially bound up with the study of the functions and qualities of things. He fully discussed his position with Pestalozzi, but still differed from him at the time of his departure.

These boys that he took with him were a constant subject of study. He gave them devoted care, and they were his unconscious teachers. He says he learned from them the invigorating effect of vigorous out-of-door sports, and was impressed by the effect of these sports on morals and mind as

well as body. But the educational value of play for the young child does not seem to have been recognized by him until later years.

The incessant demand of the boys for occupation caused him to look back into his own boyhood and search for the employments which interested him most. He recalled his long enjoyment in inventing designs on paper. This he gave the boys, and from drawing on paper they were led to an investigation of the paper itself as a material for making, and then to work in wood. The wood-working was most satisfactory for the boys; but when working with children of kindergarten age years later, Froebel found the making of forms, such as mats, baskets, etc., of paper much more suited to their feeble fingers. For them working in wood was out of the question, but he partially shaped the material into sticks, tablets, and blocks—in his words, "the gifts that are adapted to imitative construction, to satisfy the universal interest in building, and to serve thus as a certain means of expression." It was the purpose of these materials to embody ideas that the child would be unable to express by other means, and both to precede and supplement the more plastic modes of expression with brush, clay or pencil.

Let me say here that, while Froebel firmly believed in the effect these play materials would have in presenting simple and definite forms for the perception to act upon, he would have been the first today to discountenance the perverted use of these materials, in which they themselves are made objects of study and the knowing of properties is an end. While their greatest value is almost forgotten (their worth as a stimulus to activity through the suggestions for building which they present, and hence when used as a means of expressing in form the child's crude conception of the things that interest him, and, further still, the united interests of several children in construction), they were intended by him to be an agency for bringing children's activities together in a happy and natural co-operation; so, when a group of children build, their play may become a social function and a mirror of experiences, an expression of thought and life and a study incidentally of form and number.

In a similar manner Froebel was led to lay great stress upon the necessity for contact with nature, *i. e.*, by remembering his own delight in her eternal charms, and also in watching the joy of his pupils in their gardens. He recalled his pleasure in the fragrance and color and beautiful form of flowers, and sought the same for the children; and as they planted and cared for them he noted that that which really gave them the greatest happiness was the giving of the fruits of their labor to others. Then he realized that any plan of education to be true, must contain as its highest essence the idea of mutual service; for, to follow the natural impulse, each child must produce and give as well as take.

Finally after years of toil with the older children, years of conscious devotion to the interpretation of child-nature and to devising means of education, Froebel came to that realization which gives him distinction as an educator and which has given a tremendous impetus to the cause of education. This was the conviction that his former pupils had already received their decisive bent and had come to him with fixed habits that he could only change for the better in a comparatively small degree. He realized something must be done for the young child to conserve energy and prevent the stunting and perversion of activity. It must have been a strong conviction that led this man of advancing years to leave his well established school and invite the hardship and poverty that lay before him when he went to devote himself to living among young children to study them.

But did Froebel study them with scientific interest and method or did he seek to find in them only his own formulated theories?

I believe that he was more philosopher than scientist and yet his search for truth did take shape in systematic observation. While we may find no direct evidence of this investigation in the education of man we find it most emphatically in his correspondence. Let me cite an instance found in a letter to Herr Von Arnswald, who had been his pupil as a boy at Keilhau and was now his trusted friend. Froebel asks Von Arnswald to send him daily reports of the doings of his little daughter, these records Froebel read to his pupil

teachers and discussed them each morning. He writes to the father, "Your reports of the development of your baby give me much satisfaction. The notes are altogether interesting and instructing to me, and I request you to continue them and be sure that nothing in them shall be lost. The little girl of a neighbor of mine is furnishing me with daily demonstrations that song is an essential part of child-life. She never wearies to repeat her few cadences. Let me urge you, foster every breath of song in your family.

"I am experiencing much pleasure also with little Reinhold Barop, now twenty-three weeks old, who frequently comes with his nurse to see me; then I leave all to attend him in order to be taught by him. It is interesting above all things to see how the rythmical movements of his arms united with word and song give him pleasure."

Froebel found an inexhaustible supply of evidence of the intense love of rhythm in very young children. He noted it both in sound and in arrangement. Upon this instinct he based his rhythmic exercises for the body and planned handwork in rhythmic and progressive arrangements of forms. While he found the reasons for these exercises in the spontaneous playful expressions of all children, he believed that the observance and cultivation of this tendency would surely lead to a more vivid appreciation of rhythm in its higher manisfestation in nature and the arts.

In an earlier letter to Von Arnswald he says: "As your baby loves the zither, so Barop's baby (not yet twelve months old) loves the piano. It seems with him to be the loud sound and the change of sound that gives pleasure. The children of a peasant living nearby will imitate the sound of a church bell for hours, singing, 'bim, bam, bim, bam,' and will even repeat the performance on the following day when no bells are ringing. I think I perceive in this that melody and harmony are deep-rooted in the being of man and that the training of this faculty ought to be made a part of early infant education."

In the same letter he speaks of the tendency of young children to suck and munch continually, of sucking the fingers, biting the nails, etc. He says he believes it to be simply a

part of the instinct for activity which must be satisfied by employment for the hands and fingers. He says: "Let fingers and hands be led to make rhythmic motion in games and songs composed especially for them, for which the child's own invention must be watched." At the close of this communication after detailing some experiences in the antipathies of certain children to the singing of adults, he says: "You see the little beings will afford us continual problems for solution." I have simply quoted the passages to show his continued observation of children's hablts. No action seemed too insignificant to be noted; not an incident but had for him some value as a clue to hidden conditions.

Certainly no man ever took more pains to investigate children's interests; and did ever a man more truly find them? No one ever followed up children's interests more directly than did Froebel in giving them material in which to express their thoughts. Starting with the proposition "Nature is right in her methods, I will know and follow her," he found the young child possessed of boundless activity which must first be acknowledged as right and then directed into the most profitable channels.

He found in the infant these activities were of two kinds —efforts to move controlledly and efforts to grasp with the senses. "Opportunity from the start," he cried. "Freedom to act and objects to act upon."

He found later that the outer world had enticed the child on by her life and loveliness to love her. Let him live then, in the midst of nature's children; the trees, the flowers, the birds and brooks shall be his companions and his teachers. He found that in this companionship the instinct of imitation was rife, and that the notions and sounds of that world were being repeated. Let the child play, then, and give at his will his own meaning to these friends, and in imitative play let him interpret nature as she now appears to him. But nature was not imitated alone in her creatures that we are accustomed to call inferior, for the life of home waked the same imitative instinct. "Then," says Froebel, "Nature, the wise mother, cannot be mistaken." There must be purpose in this. Let him live the life of father and mother in impersonations, and

let him imitate the workers about him, the motive of the toiler, and respect for his labor will be engrafted with the action.

But here under childish fingers grow houses from a pile of blocks, and here a manikin from the soft clay of the ditch; and here the bits of chalk picked from the garden path have been used to decorate the smooth surface of the stones. So he says, the child must not only reproduce in action but he longs to set forth his ideas of the new world in the works of his hands. Why has he not been given opportunity and materials long before? Simply because we have distrusted the plain spoken advice of our foster mother, nature, and denied her truths in the daily doings of a little child.

How did Froebel study the children? He studied them alive, playing their own games, roaming, wandering in the fields, building their sand huts, gathering bright pebbles, burrowing in the sand, helping in the daily work of home. He watched the infant in the arms of the simple peasant mother, humble enough to learn from her the instinct that taught her to give employment to the struggling limbs in baby games, and thus purpose to its vague activity. He gathered the children about him and played games of his invention modeled after their own. See, side by side, the two standpoints from which Froebel must have worked—Philosophy and Observation. From the philosophic standpoint, the child-man of Divine origin must be in nature good, and so be allowed to act out that nature freely. From the standpoint of observation, growth comes through spontaneous activity. Philosophic—since man is of Divine origin—his activities must be largely creative; scientific—for the child loves to create both in plays and in materials. Philosophic—he is a member of a brotherhood, hence social in nature and to be recognized as such; scientific—he loves companionship. Philosophic—he is akin through evolution to nature, hence must feel the kinship and be brought into contact with nature; scientific—the child is known to love nature with his whole heart. Philosophic—he exists under both natural and spiritual law, hence must be law-abiding; scientific—his games show a law-making instinct and obedience to tradition which is law to him. We might

continue this parallel much further, but this is sufficient to illustrate his two view-points. How did he study the children?

Analytically, with philosophic insight, and with a poet's mind. Analytically, yet not with the scientific method of a specialist; that he left for you of to-day. Philosophically, yet not with the incisive logic of a Hegel, but with the world-grasp of a poet, and herein lies his greatness. What is the educator without the art faculty? What would Froebel have been without his artistic conception of the soul of a child, and the artistic ability to plan and conceive means for its development? A dreamer of dreams! His worth lay in his study, in his dreaming, and in his steady realization of these dreams in the children's behalf. Froebel had that quality which marks the artist, the ability to enter into the nature of a thing and, loving it, to body it forth in form. This distinguished Froebel's study of the child and his ability to plan an ideal environment made him an educational artist. It is a trite saying that art is the forerunner of its corresponding science, and Froebel's achievements bear just this relation to modern educational science. His application was an art, his sympathy with child-nature was artistic. He was able to put himself imaginatively in the place of the beings he studied. In his efforts to create an ideal environment and in his idealization of the child he set a value upon him, he gave him a dignity that places the child in your estimation today as the highest object of scientific research. Here Art and Science must be wedded. Mutually collecting and interpreting the products of each, modern laboratory investigation will prove the inefficiency of some of Froebel's occupations. But it will never prove his poetic power unnecessary in the teacher. The modern laboratory methods will bring scientific evidence of the truth of most of Froebel's fundamental principles, and this scientific proof will be the sledge-hammer to drive home conviction to the minds of people.

THE CHILD-STUDY OF HERBART.

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It seems to have become an essential feature in human methods of investigation to inquire into the origin and growth of the great waves of intellectual movement upon whose crest we suddenly find ourselves being swept along. We are not always willing to submit to the enthusiasm of each new hour, without asserting the natural conservatism of the human mind—its natural tendency to doubt the new and to cling to the old a little longer. But out of this very conservatism toward the suddenly new and enthusiastic impulses in human development is born a new motive of investigation. It is the motive that seeks for the intellectual movement, not only a still more cogent substantiation, but also its historical setting, and, by inquiring into the birth and growth of those ideas of which it has become the conscious climax, to give it a still greater breadth of sweep, and withal still greater validity, as expressive of some true principle of human progress. If we find that, after all, the old wave gave birth to the new—that the new enthusiasm is but a conscious climax of that which had for years but half consciously spoken to the human heart, though waxing stronger with every generation—that the new idea, the new movement, was after all dependent for its very birth and emphasis upon a thousand elements in all the older fields of human life and thought, and, finally that it is but the fuller expression of a more perfect humanity, we not only feel that the so-called movement can appeal more sympathetically to our own personal interests, but that its very evolution is a voucher for some significance as a principle of human activity.

It was probably some such consideration as the foregoing that furnished the motive for the discussions of this hour.

Enough has already been said to indicate clearly the historical movement in the past from scholasticism, latinity, dogma and tradition, "childward," *i. e.*, toward some knowledge of the child's laws of growth and of his needs and capacities, and some conformity to the same in his education. Comenius, Rousseau, Pestalozzi and Froebel—each gave new impulse to the movement. It is the province of this paper to show the further development of the new movement in the work of Herbart, a contemporary of Froebel's. I wish to show how the work of Herbart and of those who have sought to achieve a more perfect realization of his pedagogical ideas, has contributed essentially to that phase of the educational movement that is today finding its most pronounced emphasis in the work of Child-Study.

Herbart brought to the work and reflections of the teacher (his first field of practical activity) an intellect of rare sympathies and culture. In the midst of his studies at the university of Jena, he was precipitated, by the force of circumstances, into a field of labor that was thenceforth to hold a high place among his favorite pursuits, and in which he was to be known as master. Fortunately his education had given free play to the great breadth of his natural talents. Already we find him a musician of no mean accomplishments, a thorough mathematician, well schooled in the classics and deeply versed in the history and various disciplines of philosophy. In his twentieth year we find him a sturdy, independent and brilliant, but careful thinker; he has already been touched by the neo-humanistic movement of this day, a marked influence that never ceases to make itself felt in his pedagogic thought. To him the pursuit of the classics had already become merely a means to a great educational end; it was first and foremost Grecian culture, Grecian art, poetry, philosophy and method, Grecian thought and expression in its every phase, which he sought as an initial means of awakening the flower of German youth of his day to high cultural and life ideals. At Jena he was in the charmed circle of German poesy, then at the height of its glory, whose centre lay at Weimar but a few miles

distant. The cultural influences especially of Herder, Schiller and Goethe were the strongest and most attractive forces that moved the intellectual life about him. He was alive to the new era that was dawning upon science.

He turned to the work of house-tutor from the opening of a serious philosophic conflict in which he had already felt his own power and had visions of the new fields he was destined to plow. Long before he had entered upon his university career, Herbart had enjoyed unusually thorough schooling in the philosophic systems of Wolff and Kant. His already cultivated taste for philosophic speculation found immediate gratification in the leadership of Fichte, who introduced him to the philosophy of idealism and whose work he followed with earnestness and fidelity. His own native capacity for independent thought and investigation, however, but too soon revealed to him weaknesses in Fichte's system. It was while engaged in the resulting discussions that we find Herbart's independent lines of thought already leading him toward those psychological and ethical conceptions that determined so largely his attitude toward the child in the work of education. Such, in brief, had been the development and education of the man as he entered upon his pedagogic career.

In 1797 Herbart entered the family of the Herr von Steiger, in Switzerland, as house tutor. It at once appeared that he grasped the duties that now devolved upon him in a far more ideal sense than as those of mere house tutor; from the first he seems to have fostered that lofty conception of educative instruction that was always to characterize his pedagogic theory. It was, perhaps, this early concern for the *ideal* ends of education that placed his work forever in close and sympathetic touch with childhood and youth. On the other hand, it is very possible that the opportunities of a house tutor, inspired as he was by lofty and impressive educational ideals, may account in part, at least, for the strong personal tendencies of all his practical pedagogical work and writings. We know that the three boys who were placed under his care became at once objects of study. At once he realized that he had in his care three individuals of widely differing temperaments, tastes and capacities. For him the work of education

became at once a problem of adaptation. It was his aim to give each pupil command over the necessary body of culture and to furthur in each worthy manhood. Yet each, by virtue of his individuality, demanded his own peculiar method of approach, point of attack, means and methods. In other words Herbart was face to face with the one problem in Child-Study for the teacher, that of adaptation to individual needs, capacities and limitations, to be met only by the intimate study of the child's personality. It was just this task of Child-Study that became and remained an integral factor in Herbart's pedagogical practice, though never as an independent function consciously differentiated from the teacher's art. Herbart entered at once into the study of the physical, mental and moral traits of his pupils at Bern, and the results of his observation and study are embodied in a series of five reports to the father. I cannot better display his attitude toward the pupil than by quoting from his report upon the prospects and progress of the eldest, Louis. In his first report he says:

"In so far as I am acquainted with Louis, as yet, I believe that we must ground all hope in his understanding. He is, perhaps, too healthy, feels too well, possesses too cheerful a temperament as yet to give place in his heart to tender sensibility or intimacy or firm attachment for any haman being, science or favorite ideal whatever. At the same time, of course, he is surely quite safe from every kind of fanaticism, whatever it may be. On the other hand, he is impetuous in his desires and not accustomed to resist them himself voluntarily; hence, in view of his rapidly developing body, I fear, after a couple of years, a vehement storm on the side of animal sensuality. Left to himself, he would become, through this vivacity of the desires, an egoist, and since his natural understanding would be darkened neither by love, nor by ambition, nor by any other ruling propensity of this kind, he would become a very wise, deliberate, and consistent egoist. Through proper guidance, however, such a disposition may be developed to a most admirable manysidedness of interest and to the greatest clearness of understanding, because of its freedom from all of the more decided propensities and from all fanaticism; to great energy of character

because of the probably threatening battle with sensuality; and finally to a happy sensibility for the joys of life of every kind, because of the cheerful temperament.

"But what an endlessly difficult task! After all one must be able to take hold of him somewhere, in order to lead him! One must have wind in order to sail! One needs a mainspring (a motor) in order. to produce activity. Since no such motors are active *in* him, and since the gifts of fortune prevent his feeling the spur of *outer* circumstances, that so often become a powerful stimulus to children of needy parents—what is left but his understanding (as a sort of passive faculty to take on whatever is slowly offered him, after being previously well prepared) and the hope that this weak spark shall one day kindle *self-active* thought and the endeavor to *live* in accord with his insight. This hope is already strengthened in me by the visible growth of his attention since I have been working with him. The deadly ennui that at first often characterized him in the recitation hours has now disappeared. It now seems to annoy him more than formerly, whenever he cannot grasp something. Indeed, his interest in my instruction is still always outweighed by the difficulty of following it; so much the more agreeable, I hope, will the easier natural science seem to him. But the road over which I shall lead him will not always become steeper in proportion as his foot gains in practice."

Concerning the manifestations of religious and moral sensibility in his pupils, Herbart reports further of Louis von Steiger as follows:

"Louis' long dry sermon (the result of a conversation with his teacher) was to me an unpleasant proof of his meagre sympathy and of his propensity to notice the errors of others more than anything else that concerns them and to assail them without mercy. Traits of this kind he evinces daily. I guard against reproaching him on this account, however, for I am fully convinced that he would see in my reproof only my harshness and not his error. He does not love me yet; I can agree too little with his manner of amusement, and am still more of a burden than a pleasure to him in instruction. As long as he does not love me, I seldom dare to express my

judgment and do not desire to harass him as an ever wakeful moralizer. As for the rest, I see danger, indeed, but by no means any decided immorality in Louis' character. As yet he has formed no principles of action, either good or bad."

We have in this illustration, of which I have given but a fragment, the keen and close analysis of a type of boy still too often to be met upon the threshold of pubescence—intellectually and physically sound, perhaps, but devoid of that emotional warmth and sympathy that are born of strong motives —one who has outgrown the motives of childhood and whose education and environment have not yet helped him to sight the motives of manhood nor sought to indicate the road that would lead him to them.

But the value of this analysis did not stop here. As has already been hinted in the fragment of the report that I have just read, this knowledge of temperament, of physical development, of intellectual tastes and capacities, was at once made the basis of all his educative efforts. The youth, Louis, whose mental powers had run to waste, remaining for years undirected and without motive, who evidently felt no permanent enthusiasm for anything, who detested the classics and was slow in mathematics, though still living in possession of splendid health and good spirits, who never displayed more than a passing interest in any of the great personalities of literature or history, was approached and won by way of the single spark of interest he evinced in natural science.

I find in the treatment of these three boys, so much that is characteristic of Herbart's entire system, that I am tempted, perhaps, to emphasize this hour of his development beyond its significance. But this single illustration seems to me to pre-typify much that should be characteristic of Child-Study, as a part of the teacher's art. Here we find already strongly developed, Herbart's intense personal interest in, and sympathy for, the individual; a study of his pupils' mental, moral and physical being, based upon data that he found in his daily social and class-room contact with them, in the family life and its relations and in their material environment. Yet all this, legitimate and skillful observation of children as it was, seems to have been with Herbart almost an instinctive function of

his office as teacher. Again we find in these interesting and instructive experiences of the young philosopher that quick and skillful adaptation to individual requirements that must some day characterize the procedure of every successful teacher.

At the close of his career as house teacher in Switzerland, Herbart visited Pestalozzi at his work. Probably few Germans did more substantial service than Herbart in securing for the work of Pestalozzi intelligent, practical recognition in Germany.* Certainly no contemporary of Herbart's has given a more concise statement and rational exposition of the idea that underlay what seemed to many the aimless confusion of Pestalozzi's practice. In an early report Herbart again reveals his characteristic pedagogical and psychological traits, for he finds Pestalozzi, in his emphasis of the sense-environment of his pupils, far nearer the individual needs of children than any of his predecessors. I have not time to trace Herbart's attitude to childhood throughout all his life. One more reference will suffice. As professor of philosophy and pedagogy, at Königsberg especially, we find Herbart seeking to develop a new means of professional growth, the University Practice School. The long and perplexing trials with prejudice, tradition and governmental paternalism that marked the inception of this great factor in German pedagogical development, are irrelevant to this subject, but the plan of his seminary reveals many points that will interest us. To begin with, Herbart, like many of the pedagogs of his day, never had any conception of education that did not consciously include and reckon with the influences of the family. Accordingly his original plan was to distribute his student teachers as house tutors among the families whose children they taught. The avowed immediate purpose of this arrangement was that the teachers might study their children under a variety of conditions, and especially that they might know something of their home influences. The ultimate purpose was the more perfect, skillful and ready adaption to the child's personality in the work

* Comp. HERBART'S A-B-C of SENSE PERCEPTION and Introductory Works, by Wm. J. Eckhoff, Ph.D., Pd. D. 12mo. $1.50, D. Appleton & Co., 1896.

of instruction. The plan was attempted for a time, but failed of appreciation on the part of parents (possibly for very good and obvious reasons) and was modified. The residence of a teacher for a time in each home had to be given up. But the new plan still retained its close sympathy with the family and the individual child. The point of departure was always some one of the antecedent influences or interests, especially from the more refined forces of the home. No question was of more vital importance to his students, than that of the ready adaptation to the individual, and accordingly no function was more necessarily implied in their work than close child observation.

The claim is by no means ungrounded that Child-Study was with Herbart a part of the teacher's art. But with Herbart the art always presupposed the science in this field. What was there, then, in his doctrines that thus helped to give emphasis to what has become to-day an especially significant movement, that stimulated his followers to still further development along the same line, and to a much broader and more systematic participation in the modern work of Child-Study? I believe that we find an answer to this question, in both his psychology and his pedagogy. In the latter, both practically and theoretically, the family is justly regarded as the first and greatest force in education; for nowhere else is the individual recognized as such so perfectly or so long. Getting the theme of his educational doctrine in the family, therefore, Herbart remains true to the strong personal element which there finds emphasis. In no other sense do his doctrines of apperception and interest have any profound significance. Only in so far as the teacher is able to know something of the individual interests of his pupils, and their origin—only in so far as she approximates a knowledge of their mental properties and of the environment that furnished them, can he hope to secure any adequate application of these two doctrines. They undoubtedly furnish the key to an understanding of Herbart's attitude toward the child.*

*We are apt to think to-day that the endeavor to utilize all that is individual in the child and in the forces that have made him, is something very peculiar to the present day. Yet there is little new under the sun. In fact,

The object of this paper has been purely historical. In pursuance of the same end it may properly close with a brief reference to some of the phases of modern Child-Study movement, that were stimulated by Herbart's work. The pedagogical work of Herbart and his followers stands as a protest against the mass-treatment of children, merely in accordance with standards set by a mythical average or type-child. Hence we shall not be surprised to find many among his followers interesting themselves in the problems of the individual child, inquiring into his possible physical limitations or disabilities, and into those mental or moral idiosyncracies which it is the business of education either to recognize and utilize or to respect.

Prominent among modern workers in Germany are Hartmann and Lange, who have long been engaged upon the study of children, directing their efforts especially toward finding out something of the contents of children's minds upon entering school. Their efforts have only been partially successful, owing to peculiar difficulties in the work, but enough has been accomplished by them and others in this line to indicate the need of very great changes in the curriculum and text-book and a much more perfect adaptation to the individual school. Hartmann has also given us one of the first and most serviceable characterizations of the different stages in the development of the child. (Comp. The Culture Epoch Theory, First Year Book of Herbart Club.)

This same work of the analysis of the child's thought-circle upon entering school, has been regularly and successfully carried on by Rein in his small first year classes in the

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the problem of Child-Study, so far as the teacher is concerned, was fairly stated and a complete plan of child-observation arranged for pedagogical purposes over one hundred years ago by a contemporary of Pestalozzi's. In the sixth appendix to Vol. 1, of Niemeyer's Grundsätze der Erziehung (Mann's Edition, Langensalza, 1882, page 328) the reader will find a chapter devoted to the observation and examination of the dispositions and capacities of children. The character and contents of the chapter may be indicated by the following captions of its different sections: Importance of the First Impression, The Aids of Continued Observation, Physiognomical Observations, Cranioscopy, Observation of *Naturel* and Temperament, Utilizing the Judgment of Other Persons, One's Own Observations. In some interesting notes Niemeyer traces this idea of plan, purpose and method in the observation of the human individual still further back to such philosophers as Bacon and Aristotle.

University Practice School, as a means of securing some immediate knowledge of the individual mind, and a basis for the work of instruction. The same institution regularly carries on for each and every pupil, that most charming of all Child-Study measures to the teacher, the study of the growth of personality. In this work we see clearly and consciously reflected Herbart's idea of a progressive adaptation to individual needs and capacities, interests and instincts. Here (at Jena) also, Conrad Schubert first tested and applied the method of questions to parents, known practically to the workers of this Society (Comp. Hand-book, Vol. 1, No. 2, Trans.).

Christian Ufer, one of whose works is known in translation to American readers, has for years been occupied with an inquiry into the physical condition of children in schools of Germany and into the causes of so-called school diseases. In addition to this Mr. Ufer has accomplished a great deal of work along the line of the pathological mental development of children.

Hans Trüper at Jena is the founder of a school for children that present unusual difficulties to the educator because of peculiarities, both physical and mental, that place them on the borderland of mental defect. He is making valuable contributions to the study of just such children, and has also recently united with Ufer and others in founding a new educational journal, entitled, "The Failings of Childhood," devoted especially to the psychiatry of children.

The above instances, which cover only a part of those that might be cited, will suffice to show that the temper of Herbart's work has not proven unfruitful in stimulating newer and more complete work in child-observation, resulting in valuable contributions to the science of childhood.

CHILD-STUDY IN ILLINOIS.

DR. C. C. VAN LIEW,

SECRETARY-TREASURER ILLINOIS SOCIETY FOR CHILD-STUDY.

One of the features of this convention should be the opportunity for the active workers in this line among the teachers of the state to speak. I shall, therefore, make an effort to be brief. What I shall say will refer largely to the progress of the Society during its existence the last two years. At this congress the Society is opening the third year of its existence. This is its third congress. As some evidence of our growth, I think that I may say that at the close of this meeting we shall undoubtedly have some 1,300 members. These members are not confined solely to the state of Illinois. We were the first state association in Child-Study in the field, and our publications were among the first attempts to reach, at the least cost, a large number of teachers. This gave us an advantage which I presume other state societies will never have—the advantage of being the first in the field, the first with our publications; hence, we secured a great many representatives outside the state. We have representatives from nearly all the states of the United States. Some of them furnish in the neighborhood of forty or fifty members, as Indiana, Michigan, and New York; others, but two or three. It does not stop there. Our membership extends into Canada, where we have several members. It does not stop there; we have several members, representatives of the leaders in the Child-Study movement in England, who are interested in several Child-Study associations that have been formed in the different parts of England, and have become members of our society for the purpose of securing the benefits which we think we have been offering them. We have also members in Scotland, one in South Africa, a member in Japan, and, I suspect, a member in India. I do not know as it stops there, but my memory does not extend any further.

There is one feature of the organization to which I would

like to call your attention, because we have been maintaining this feature at some financial sacrifice. The idea was to require just as long as possible only the simple initiation fee of $1; so that all of those who have been members from the first have never had anything to pay except an initiation fee. This had a purpose; it was to retain our hold upon all those who started in with us in these first years just as long as possible, and to put into their hands, as due to their membership, all the publications that came out. We have attempted in this way to hold all of those together who started out with us with enthusiam and interest, and to develop by that means a sort of community feeling among those who have been connected with the Society from the first. I think that community feeling exists; I think we find it present at this meeting; and in my correspondence with members from time to time, I find evidence of it. It is a source of strength to us. We are united in an effort that means something for the schools and for the children of the state. I want to suggest to you now that we further foster this feeling, this conception of a common interest in studying the child, that has grown up thus far among us.

I want to speak just a word as to the results of our work. The first great result was to lift the subject of Child-Study into prominence before parents, teachers, and philanthropic and sociological students of all kinds in the state. That has been done. The subject has been heard of all over the state by parents, teachers, and any and every one who is interested in social and educational questions. That has been our first great work. Again, when I reflect upon the words that have come to the different officers of the Society as to the work that teachers have been carrying on, I must say that I think the work of the Society has affected the treatment of the children of the state of Illinois at a great many points and very essentially. We have tried to give some expression to the results in this line in one of our publications. In this report, simple, perhaps in some respects crude, as it is, we have a hearty testimony to the value that the work of Child-Study has been to the teachers of this state. This has been our second great practical accomplishment.

In conclusion, I want to point to what seems to me to be just one of the needs that the teachers of the state are feeling, if I may judge from their own words. It is a large state. The association stands not only for the state, but for many outside, and it is glad to extend its aid so far as possible to the individual teachers in a way that will really guide them in their work. But right here, in fact, is where they feel the want and the lack of something—it is local leadership. The work has not been taken up with great unanimity and spontaneity by the local leaders of the teachers as it has been by the teachers who are in direct daily contact with the children. I think one of the most important things to be done is to get our superintendents and principals all over the state to interest themselves in the subject of Child-Study in such a way that they will undertake to become local leaders of the teachers around them in this work. A large number of the teachers already feel that there is something that they can do in Child-Study, and that there is a great deal they must do — a great deal that they cannot leave undone. But where to begin? Where to take hold? That is the question in the minds of a great many. It is just the question which needs to be solved by those who are their superior officers. Not only that, but they need to have a feeling of sympathy from the superior officers; they need to feel sometimes that they dare do. I will give one incident which will show what I have in mind. One superior officer was scandalized that his teacher had dared to take the liberty of having a child examined by a physician because the child was in daily pain, and was daily being deprived of his natural physical rights. He was scandalized! That is a thing which sometimes exists. Teachers want to feel that there is going to be sympathy from the "powers that be"; they want to feel there is going to be permission and opportunity given them, to observe, to inquire into, the condition of their children, if it be nothing more than their physical condition. It is a step which might well be taken in any school in the state. That is my final point. I simply desire to call attention to the fact that there is need of local organization and local leadership in our work now.

CHILD-STUDY IN THE TRAINING SCHOOL, NORMAL, ILL.

DR. C. A. MCMURRY,

NORMAL, ILL.*

I am very much obliged to the President for telling me what to talk about; I felt a little uncertain. I shall not take more than two or three minutes of your time. The great question for us in our school work, that is, for us as teachers, is to find out what use we can make of the data which are being given us by those who know more about scientific Child-Study than we do. In some respects, I presume, it might well be said that the teachers who are dealing with the children day by day, if they are thoughtful, if they have any wisdom in their observation and interpretation of child-life and conduct and of child troubles—it may be said that these teachers are perhaps in closer, more direct, what you might call "spiritual" contact with the children than anybody else, even the scientists themselves. It seems to me that of all persons, the primary teachers, at least, ought to stand in the closest touch and sympathy; and, in a measurable degree, all teachers, good teachers, ought to stand in close spiritual touch with the children, and have the capacity, the ability, to understand, though not scientifically, yet instinctively, the needs and impulses and the environment of children. One of the most curious revelations of this entire discussion is the fact that we teachers who are at work with the children have been, for years, blind, practically blind, to many of the most serious difficulties and actual troubles which have prevailed in the school-room. It has been proven in various ways within the last two or three years that many very careful and excellent supervisors, both men and women, in this state, have

* Now Extension-Lecturer, Chicago University.

found out that they have not been understanding the conditions of the poor hearing and seeing of children, although they have been working with them for years. We have waked up suddenly to the fact that there are causes of difficulty and obtuseness in school work to which we have not turned our attention appreciably in the past, and which deserve our most careful consideration. It seems to me, therefore, that in a certain sense, one of the strongest holds the movement has on us is that it extends the range of our common-sense observation of children. Certainly it is a matter of common-sense that we should understand these physical conditions of children; that proposition simply needs to be stated in order to be accepted. We as teachers ought to be ready, ought to be watchful, for these absolutely essential physical conditions of the children. That, to my mind, is one of the most certain proofs of the facts that this movement has been of great service to us. It reveals to us that we are lacking to a certain extent in what people might call common-sense treatment of children.

I wish to call attention to two or three things we have been attempting in our own school. Dr. Van Liew, at the beginning of last year, in connection with the supervisor of our primary work in the training school, took the trouble to outline a series of questions, by which they tested the children who were first entering, to personally study these children, to question them, to talk with them, to find out what they knew. Two results I would like to point out: First, that the teachers have become better acquainted with the children, with little children at the beginning of their school work, and more appreciative of the knowledge and condition and equipment with which the children enter the school; Second, they have come in contact with the parents, because, in order to find out what the children knew, what their previous state of living was, their mental and physical life, the teachers had to call in the parents, and thus bring the parents into close relationship with this movement and see what the teachers were trying to accomplish. The interest of mothers was especially awakened in regard to these problems.

We have made some effort, also, in the matter of trying

to find out defectives in seeing and hearing. In all grades, we have found that some of our 'dull' children were defectives. That confirms what others have said heretofore.

We have also made some effort at individual study of children in various ways. We have some teachers who have taken advantage of our recesses, noons and afternoons to some extent, for the purpose of studying the life of children in those spontaneous movements and activities where they express themselves most freely and naturally. We have occasionally taken two or three of the poorer children and put them in the hands of special teachers for some careful study. In a few cases, we have appointed a teacher to look after one child and make close observations, without the knowledge of the child, of couse.

In the normal school, where we have an abundance of young teachers just opening their eyes to problems of education, it seems we ought to employ just such opportunities. We have many teachers who can observe, and more than that, we have found that teachers are very ready and very sympathetic, to go to work, to become personally interested in children, and make their observations with great intelligence.

We have also asked in our teachers' meetings, in some cases, that a body of forty teachers select some particular child for the term, without the knowledge of the child, and make close observations, as to the mental, moral and physical condition of the child. The general tendency of our schools is to mass instruction and drop out those who are deficient; at least, not to give them the kind of attention which they most deserve. It seems to me, also, that there is quite a field for Child-Study in the school excursions. This point has been referred to once or twice. We have great meetings on our campus. The disorder, which is almost discouraging at first, in this work, is really the thing which opens up the opportunity for the best observation, the animal freedom, spontaneity, the disorder which naturally springs up in field excursions. It is more difficult to control children out of doors in the open air than in the school house. I do not suppose that most of us will try to control them fully. We will give an opportunity at least for some fun at some time, even if it occurs during

school hours. It is true that children are more free, that they are more natural, that they are more easily understood in their dispositions and quality of character in this freedom, than they ever can be in the school room, and I believe most assuredly that those of us who will do that work will find that these excursions, if they are conducted in the proper spirit at all, will lead to greater sympathy and better appreciation between children and teachers, than any school work itself.

Dr. Jastrow said that the scientist feels restive under a demand for something practical. We teachers want something that we can make use of in the school room, and we have a legitimate right to demand that this movement shall furnish us inspiration and definite suggestion in various ways, and there is no doubt in my mind that it has already done that. The great body of teachers have a right to call for something which is specific, something important, something definite which can be put within the reach of ordinary teachers.

Another point: It is certainly true that there are a great many things which will have to be worked out in the line of Child-Study by the scientist. A great many experiments and a great many scientific investigations will have to be carried on, which furnish no clue of practical value. That is true of any science; but things seeming to be worthless may at some future time develop into great value.

There is another simple suggestion which lies within the reach of us all as teachers, and which the child-study movement has brought to light. We are breaking away from the narrow view of child-life, the school influences which confined us to the trodden path of school text-books and school work in its narrow view. We are breaking away from that, and looking into the home. We are looking to the play ground. We are looking into the pre-school life of the child, and the post-school life of men and women. We are broadening our views of education in every direction. We are trying to find out how far the materials of instruction in history, geography, and other studies, have immediate value for children in their school work. We are trying to find out, as we use American history stories, as we use the best masterpieces of literature, what material is best suited to stimulate children

at different ages in their immediate school work. We are enriching the school courses by these means, and this acts not only as an inspiration for the children but for the teachers. The great question is, how can we as teachers come under the dominant influence of these great culture materials, under the influence of nature with her myriad forms of beauty, under the charm of these powerful things in literature and science, which will qualify us to meet these little children and suit the materials of instruction to their needs?

ANSWERS TO THE QUESTION, "WHAT DO YOU WANT TO DO WHEN YOU ARE GROWN UP?" OBTAINED FROM KINDERGARTEN CHILDREN, AND A CLASSIFICATION OF THE CHILD-STUDY RECORDS FROM THE KINDERGARTEN OF THE COOK COUNTY NORMAL SCHOOL; FOR THE YEAR 1895-6.

BY ANNE E. ALLEN.

In answer to the question, "What do you want to do when you grow up?" I received the following replies in the Kindergarten of the Cook County Normal School:

Four girls, aged respectively 5 years 6 months, 4 years 10 months, 6 years 1 month, 5 years 3 months, 5 years 4 months, would be housekeepers and go shopping or help mamma.

Three boys, aged 5 years 9 months, 5 years 5 months, 5 years 11 months, would follow their father's profession or business.

A minister's son of 6 years 2 months would be a carpenter.

A boy, 5 years 3 months, whose father is a county superintendent, would also be a carpenter.

A girl, 5 years 7 months, would like to be a teacher and be an old maid.

A girl, 5 years 10 months, would "marry like mamma."

A girl, 5 years 3 months, would stand in a store until old enough to marry.

A boy, 5 years 3 months, would be a lawyer, because he can make money and his mother wants him to.

A girl of 6 years would be invited to parties.

Three girls, aged 5 years 9 months, 5 years 4 months, 6 years, 1 month, would be kindergartners, and one would also go to parties.

Three girls, ages 6 years, 5 years 3 months, 4 years 6 months, would be teachers of older children.

One girl of 5 years would have a desk and write.

A boy of 5 years 4 months would be an engineer.

Another of 4 years 10 months would be a street car conductor.

Another boy of 5 years 6 months would be a farmer, because then he can milk cows and drive cattle.

A boy of 5 wants to live in a large park with a church in it, with statuary of Christ, with horse, carriage, servants and a large house. Doesn't know how he will earn the money, perhaps in father's office.

A girl of 5 years and 7 months wants to be a housekeeper and take care of children, letting some one else do the work.

A boy of 5 years 8 months wants to be a milkman, so he can get lots of money.

Another of 5 years 6 months wants to be a farmer, so he can get out on the farm and have lots of animals.

Another, 4 years 11 months, wants to get a horse and ride.

Another boy, 5 years 11 months, wants to be a policeman.

Girl, 4 years, wants to be a cook.

Another, 5 years 8 months, wants to make children's clothing.

Boy, 6 years 4 months, wants to be a fireman.

Girl, 6 years 5 months, wants to be a mamma or a teacher, doesn't care which, so she can have the care of little children.

CLASSIFICATION OF CHILD-STUDY RECORDS.

Number of Records filled out.....28
" " " " " for girls.....14
" " " " " for boys.....14
Weight of girls from 4 to 5 yrs.....33 to 45 lbs.
" " " " 5 yrs. 1 mo. to 5 yrs. 11 mo, 35 to 45½ lbs.

Weight of boys " 3 yrs. 6 mo. to 4 yrs.....31 to 35 lbs.
" " " " 4 yrs. 2 mo. to 5 yrs.....35 to 40 lbs.
" " " " 5 yrs. 2 mo. to 6 yrs.....39½ to 47½ lbs.
Height of girls from 4 to 5 yrs.....38⅝ to 42½ in.
" " " " 5 yrs. 1 mo. to 5 yrs. 11 mo. 39¾ to 43⅝ in.
" " boys " 3 yrs. 6 mo. to 4 yrs.....37½ to 39 in.
" " " " 4 yrs. 2 mo. to 5 yrs..... 39⅝ to 41½ in.
" " " ", 5 yrs. 2 mo. to 6 yrs.....40⅝ to 45¼ in.

Twenty-five of this number have apparently perfect eyes.

Two have eyes a little weak — one has poor eyes under the doctor's care.

Twenty-four have perfectly healthy ears.

Three have some trouble with ears—ears being sensitive to cold; none are very deaf, one slightly so.

Eighteen have no apparent catarrhal difficulties; 3 have catarrh slightly; 1 has it a good deal.

Eighteen are apparently not at all nervous. Six are nervous a little. One is quite nervous.

The girls began to talk from the age of 9 months to 2 years and from 1 to 4 years learning to talk well. Five girls talked at 1 year of age.

The boys began to talk from the age of 11 months to 2 years, and were from 1 year to 4 learning to talk well. Four boys talked at 1 year.

Only one of the 28 sleeps poorly; breathing in all but one or two instances good; in these cases the children sleep with mouth open, caused by catarrhal trouble.

Very few if any dream in most cases, and in most instances the dreams are pleasant. Almost all the children talk occasionally in their sleep, but none walk.

Three children use coffee and tea, but not much and very weak. In all cases the children seem to be very carefully fed, using grains, fruits and vegetables generally with very little if any meat or rich foods.

Health of all seems to be good with about three exceptions. In these three cases the children seem to be very nervous and in one, especially, I strongly advised taking him out of the kindergarten, as he seemed to suffer from the noise and confusion of the crowd of children.

In most cases there is very little endurance of pain, but in two instances the children seem to be quite heroic.

Twenty-five ask many questions; 3 do not. Twenty-one ask from curiosity; 8 from talkativeness. Twenty-seven from reflection. Questions in the case of 7 spring from all these causes.

Most of the answers to the question, "To what extent does the child display ingenuity and fancy at play?" were very vague and unsatisfactory. In many cases where the child was said to display little or no ingenuity or fancy, I knew it to be otherwise. In one instance the child has a play-child who is younger than himself and to whom he always talks as to a much younger person.

The mother in 18 cases has the entire charge and care of the child. In three cases the children had a nurse until 3 years of age. In two instances the fathers are ministers and assist a great deal in caring for the children. In the remaining five cases the grandmother has been an assistant in caring for the children.

Ten have had many companions; 2 have played mostly with brothers and sisters; 1 has had 3 companions, while 18 have had very few, if any. Eighteen have been much in the company of adults; 10 have not.

The favorite toys of the boys are engines, boats, soldiers, marbles and balls. Favorite occupations.—Cutting pictures, drawing with pencils or crayons, building with blocks, looking at picturebooks and hearing stories read. Favorite plays.—Housekeeping, head of family, horse, and any game involving a great deal of running. Fancies.—Some fancy themselves at the head of a family; others play they are conductors, dentists or grocers. Work.—Making gardens and doing different kinds of housework.

The favorite toys with the girls are dolls, paper dolls, blocks, blackboard. Favorite occupations.—Sewing, blowing bubbles, and imitating the work of others. Plays.—With dolls, playing lady come to see one, cutting pictures, playing kindergarten, looking at pictures, hearing stories. Fancies.—Takes part of teacher in Sunday school or kindergarten. Is mother to dolls. Work.—Housekeeping, doing what the mother does.

In all cases, with but two exceptions, the boys are gay and active, and in these two they are rather active, but inclined to be serious. The girls, with two exceptions, are active and gay; and these two are *very* quiet; *one* is active but not especially gay.

Fourteen do not play peaceably with companions; 13 or 14 do. Sixteen or 17 wish to govern; 11 do not. Five are governed by companions; 5 are not. (Note.—The quarrelsome are generally the ones who wish to govern.)

Nineteen are inclined to be generous. Nine are more or less selfish. Twenty-two are kind to animals; 2 treat them well at times, but tease and torment them at others; 1 is unkind at times; 3 have had no experience with animals. Sixteen show hasty temper; 4 are angry occasionally. Seven show very little temper; 1 is occasionally angry, but is inclined to sulk.

Causes given.—When asked to do things they do not want to do; when unjustly treated; when their property is disturbed without their being consulted; when teased; when corrected for wrong doing; when they can't have their own way; one is angry when her hair is combed.

Eighteen cry easily; 10 do not. All are affectionate, with but one exception. Twenty-one are demonstrative; six are so to a few only; one is not at all so.

Eighteen are not at all afraid; three are afraid of the dark; one of cats; five of dogs; one of dangerous situations; another of high places; one of tramps; one of burglars; one of carriages, trains, sudden noises; one of rag-pickers; one is afraid of everything until she finds out it will not hurt her.

All but one are fond of color and pictures (one likes red especially). All but two children like stories; in 6 instances they like any kind; 2 boys like stories of adventure; 2 like emotional stories; the others like animal stories, fairy stories and reminiscences of their parents and their own early life.

Eighteen are not easily embarassed; 8 are; 1 not very. Twenty-three do not blush easily; 4 do; one blushes always when pleased.

Twenty-five have been spanked; 4 have never been pun-

ished bodily; 1 has been put to bed, and 1 has had his mouth washed out with soap and water.

Thirteen obey readily; 12 do not; 3 do sometimes; 1 obeys readily at home.

Twenty-seven like to be occupied, while only one does not seem to care. Twenty-four are persistent in carrying out their affairs when undertaken; 2 are moderately persistent; 1 not at all.

Twenty are skillful in undertaking practical occupations, such as dressing themselves or performing any home duty; one is quite helpless, another awkward in work, but can do anything about the house, quite well—that is, within the limit of her strength; 5 are very unskillful; 1 does not care to do anything for anybody.

Seventeen are persistent in any one form of play or occupation; 2 are inclined to flit from one thing to another; 2 depend entirely upon the interest the thing has for them as to whether they persist or not in doing it. One persists in whatever he undertakes until his purpose is accomplished. One will play persistently with one toy for 2 weeks at a time.

Fourteen are careful of property and orderly in the care of same; 10 are not; 2 are only partially so. Seventeen respect the property rights of others; 8 do not; 2 not altogether.

Seventeen search to some extent for the cause of things; several continually search until satisfied. Four search to some extent; 8 do not.

Nine have tried to make collections of things, such as stamps, pictures, stones, marbles, leaves, flowers, bugs, scraps of cloth, and trinkets thrown aside by others, coins and buttons, spools and cards. One has collected samples of her own dresses.

Eighteen decide upon a course of action readily. One is deliberate; 5 hesitate; 1 not sufficiently marked either way.

NOTE.

These records I feel will contribute little or nothing to scientific research, but have been invaluable in directing the attention of the mother, especially, to the child in a way entirely new to her.

In two or three instances the father has undertaken to answer the questions, but has shown almost complete ignorance of the real character of his child, or has made light of the questions.

So far as I can judge from my experience with these children, the records in the main have been fairly well written, though in the exceptional cases I feel that I cannot agree with the statements made in many instances. I find in regard to fear that some of the most nervous children are those who are not afraid of anything, while those whose nervous system seems to be in the healthiest condition are apparently afraid of many things. This would lead one to suppose their fear to be the result of training in some way.

As to stories, it seems scarcely fair to judge of the favorite kinds because in so many instances the children seem to have been told only one kind. In one case, for instance, the child is reported to be very fond of Bible stories, to be, in fact, *most* fond of these. The father of the family being a minister, she may have heard no others,

I think that a very different method will have to be pursued before the records of the characteristics of children will be sufficiently scientific to furnish data upon which to base the future work with them.

REPORT OF WORK OF NORMAL PARK ROUND TABLE FOR CHILD-STUDY.

MRS. W. S. JACKMAN, CHICAGO.

On the afternoon of April 15, 1895, a dozen or more mothers assembled in one of the rooms of the Cook County Normal School for the purpose of founding a Round Table for Child-Study. Officers were elected, the work of the central organization of Illinois was explained and a discussion followed in which it was agreed that all should provide themselves with the two publications of the society, the Transactions of the first general meeting and the Hand-book, these to be studied during the summer, and a plan for the work of the Round Table decided upon at the first meeting in the fall. At this meeting, Oct. 1, four lines of work were considered and were proposed to the Round Table, which had at its first meeting a membership of twenty-five, increasing during the year to about fifty,

The plan as presented was, first, the adoption of Preyer's Infant Mind for study and other supplemental reading to be decided upon from time to time. A number of the books with other literature on the subject of Child-Study were to be placed in the Normal School Library for the use of members of the Round Table. Second, to hold two meetings each month, the first and third Tuesdays, the first to be an afternoon meeting for mothers, the second an evening meeting for both parents. Third, the printing and distribution of a list of questions to parents intended to draw out facts in regard to the physical and intellectual nature of the child. Fourth, a half-day each week was offered by a local physician, Dr. Cornelia De Bey, for the purpose of making an examination of the physical condition of the children of the Normal School.

Considering first the line of investigation pursued at the school, a record was taken embracing nationality, birthplace, residence, number of children in family, number each of boys and girls, diseases the child had, and tests as to condition of eyes and ears. In connection with the above the following questions were asked:

What time do you go to bed? What time do you rise? What do you eat? In particular what do you eat at breakfast, and are you hungry for breakfast? Do you drink tea and coffee?

In the short time possible to give to this work it was decided best to begin the examination with children whom the teacher suspected of having a defect, or who, for reasons not understood by the teacher, seemed to require more attention than the average child.

The following is a list of children in the eight grades numbering about 400 who, in part by tests made by Dr. De Bey at school, partly by specialists in the city and elsewhere and in part by tests made by grade teachers are believed to be deficient in sight and hearing:

	EYES.		EARS.	
	GIRLS.	BOYS.	GIRLS.	BOYS.
First grade.....	2	4	1	3
Second grade...	1	2	0	1
Third grade.....	2	2	0	2
Fourth grade...	3	1	1	1
Fifth grade.....	5	3	3	1
Sixth grade.....	6	1	3	4
Seventh grade..	6	8	0	8
Eighth grade...	18	3	3	0
	43	24	11	20
	24			11

Eyes, 67 boys and girls. Ears, 31 boys and girls.

A total of nearly 100 children out of about 400, defective in sight or hearing.

It is not probable that all or even the greater number of these sixty-seven children require glasses at this time, but the

question which presents itself to the teacher is what special consideration do they involve on her part in the school. That they do require special consideration no one can doubt who examines them even in a cursory manner. Here is a record of a boy of nine in the third grade who is able to see clearly at about half the range of the average child, who has slight astigmatism, is pale, narrow chested, says that he drinks tea and coffee and sits up quite late at night playing games or reading. His brow is wrinkled horizontally, and he makes unpleasant twitching movements of the muscles of his face.

A girl of about ten is both short-sighted and has a trouble with the middle ear occasioning slight deafness. The brother aged thirteen has also a defect of the ear. A boy of thirteen has decided trouble with vision dating from an attack of scarlet fever. The mother being requested to come to school for consultation replied that she felt sure the boy would outgrow the defect and that she did not wish him to wear glasses. Here surely is a case for considerable attention.

Another is a boy of eleven who is markedly deaf from some affection of the middle ear. A girl of fifteen in the fifth grade whose father died of heart disease and whose sister died of consumption at twenty years, has a narrow chest, drooping shoulders, is very nervous and continually bites her nails.

One other case is that of a boy of seven years in the second grade who is nervous, starts up in his sleep, says he sees things on the wall, is slow and inattentive in all school work requiring form-expression, but shows great interest in animals and in the making, required in the sloyd, or in doing.

Similar cases might be multiplied but these are sufficient to indicate the *great need* that to-day exists in all of our public schools for regular, systematic examination of *all* the children by skillful physicians at least once during each school year. That the day is not far distant when there will be such an examination cannot be doubted, but until that time the conscientious teacher who desires the welfare of each individual child cannot ignore the appeals for special consideration that confront her each day.

In justice to these defectives in sight and hearing the old method of placing all the bad boys and girls on the front seat

must give place to an advantageous adjustment of seats to children with reference to their ability to see and hear.

A careful arrangement each day, and at different times of the day, of the blinds, so that the child with weak eyes may not suffer from the glare of sunlight or sit during a recitation at such an angle with the blackboard that he would only be able to read with an effort.

Children who have ear trouble should not be required to sit by the window which may at any time occasion a draft, and such children should be admonished and the very little ones watched that they do not run out at recess without wraps and the head covering that they usually wear.

The following questions will occur to the teacher whose attention is directed along this line. What posture or habit of the child at school is likely to increase the defect? Is the habit increasing? Does it vary, and from what cause? What modifications of school-room work and customs are necessary? What is the meaning of the child's desire to hold his book within a few inches of his eyes? Why does he turn his head, or hold his book crookedly? Why does he wrinkle his brows, or twitch the muscles of his face? Has the child had some illness? If so, the same care must be exercised with the eyes as with any other part of the body that they be not overstrained. Do the parents fully understand the child's condition?

Before passing from this subject the following incident of work may be interesting as indicating a line of investigation of the child's ideas of his social and moral relations in his community life. It is to a great extent assumed that in some way or other the children will obtain clear ideas on these points without definite teaching, but a little inquiry will develop the fact that in this domain as in the material world their ideas are vague. A boy of twelve years was sent to us with the statement by his teacher, fully endorsed by the mother, that the boy lacked the moral sense, would lie, and take small things. He was a neatly dressed dark boy with drooping chest and slightly slouching gait. We examined his eyes and found them normal and his hearing acute. A little girl and one other boy were in the room with a teacher and

the following case was put to the teacher and the three children asked to listen attentively: Two neighbors own each a farm which they value at eighty dollars an acre. One man desires to sell. In the vicinity is a man who alone knows that the farm of the man who wishes to sell, is underlaid with silver, and is worth much more than eighty dollars an acre. What would you do if you were in this latter man's place? would you offer him eighty dollars or the price you know the land to be worth? The teacher, of course, and the children were questioned. The little girl, eight years old, at once said she would give the price the land was worth; it would be cheating to do otherwise. One boy agreed with the girl but the boy for whom the hypothetical question was propounded said he did not know, it would not be "business" to do that. The man had a right to his knowledge—it was his good fortune; *that* gave him the advantage and he had a right to use it. We asked this boy to further consider the question during the following week, to propose it to the other boys, to bring to us similar cases that may have happened in school or to think of cases that might occur. I confess to you, friends, that while the boy sat and pondered over this question all other school questions seemed utterly insignificant when compared with this problem that held his attention. Were he my boy I should prefer that he should work upon this moral question night and day until he had mastered it in the right way, even if he were thereby missing valuable training in reading, writing, and spelling. Right here, if the teacher will get on the other side of the wall of conventional school life that so often shuts from her the real knowledge of the thoughts of her children, is an opportunity for honest, earnest teaching that the world sadly needs. I am glad to add that this boy did not seem entirely satisfied with his decision and came back to us in a week to declare very firmly that the man should have informed his neighbor; that *it was right to do so.*

Passing to the subject of the gathering of data I must admit that it is a question of great interest with me whether or not the material thus collected will be for years to come of any considerable value to science. That the habit of observation thus formed by the mother will be valuable to *her*,

there can be no doubt; but owing to the fact that few mothers are accustomed to making unbiased, systematic observations extending over a considerable period of time renders the work scientifically more or less unsatisfactory

There are several questions with reference to the coming year's work in Mothers' Clubs that might be discussed with profit. For instance, should it be the purpose of a club to study what is already known about the development of childhood and apply this to the upbringing of their own children or should they be stimulated to observe simply and to draw their own conclusions.

How much work for the sake of science primarily should mothers undertake? What value may a mother derive from the study of children according to Preyer's Infant Mind?

The record prepared comprised in part the questions of Dr. Van Liew as printed in the handbook with a number of additional ones. The work was carried on mainly by Miss Anne Allen of the Kindergarten department, who has to-day presented her report of the work.

Finally we have met with a hearty response from all those whom we have asked to address us at the meetings and many workers have expressed themselves as having been greatly assisted by the information thus received. Among those who have helped us are Miss Anna Bryan, of Armour Institute Kindergarten, on the subject of Children's Plays; Dr. J. H. Kellogg, of Battle Creek, on Food, its Moral and Intellectual Value; a most instructive talk on The Eye, by Dr. W. S. Fowler, an eminent oculist; an evening talk on Child-Study, by Dr. W. O. Krohn; The Emotions, by Mrs. Frank Stuart Parker; The Physical Side of Child-Study, by Dr. W. S. Christopher; Detection of Diseases in Children Through Exact Measurements, by Dr. Bayard Holmes; and The Relation of the Home and School, by Col. Francis W. Parker.

Before closing I wish to devote a few moments to describing the phase of the work which was somewhat experimental, but which I believe to be practical in any community. Two regular evening meetings of the Round Table were held in which an exposition of new methods in education was made. It was divided into primary and grammar work, the first

evening being devoted to the former. Several short recitations by the children were held, followed by explanations and discussion of the work by the grade and special teachers, an attempt being made to make the work bear directly upon and explain the departures in educational methods that have taken place in the last ten or fifteen years. These meetings were followed by an evening talk on the "New Education," still further explanatory of the new ideas, by Supt. Orville T. Bright.

A large number of parents attended these meetings, and there is no doubt that many were greatly assisted in understanding what is being attempted in the schools.

The keynote of the movement for Child-Study is co-operation. Mothers, teachers, and physicians must act in harmony and be acquainted with each other's work to such an extent as to enable them to work together intelligently.*

Every community has its learned men, its physicians and specialists who are ready and willing to meet with parents and instruct them. A work might be carried on in each ward of the city, in each town and village, which would vitalize the home and render the teacher's work doubly effective. If the parents could be invited one evening each month to the schools where they could see these new educational methods, so different from the old rote learning of their children, and, because new, suspicious, actually being practiced—if outline prints upon that indispensable auxiliary to the modern school, the school printing press, could be given, embracing the work of the children for the month, together with suggestions as to books and stories to be read with them, or phenomena in nature to be observed—in short, if a simple extension work, reaching the humblest home, could be carried on, would not a great step be taken towards a closer union of the home and school? In almost every community there will be found a small but increasing number of parents who are beginning to feel that their duty is not complete when they have selected the best school to which to send their children, and have seen that they attend with regularity, but that they must visit the

* How to Organize Round Tables, by Mrs. Ellen R. Jackman, Werner School Book Company, Chicago. Price, 25 cents.

school often to ascertain if the laws of hygiene are obeyed, and if the seating, ventilation, and all that pertains to children's health is satisfactory, if the children have proper physical exercise, if the laws of human growth are obeyed in the teaching. They must know something of the psychology already discovered and agreed upon by prominent authorities, and whether the teacher conforms to it or not. It is no longer a figment of the imagination that such parents exist. During the last year I have met them, have had letters from them, and their earnest, thoughtful words in regard to the education of their children remain with me as a prophecy of the future.

By the efforts of the teacher, with the co-operation of such women, a work may be accomplished in each neighborhood that will revolutionize it.

In conclusion the great problem to-day is not alone how to educate the children, but *how to educate the parents*, so that working in harmony with the teacher in a study of the individual growth and needs of the child he may be led to work out his own highest development.

LONGWOOD ROUND TABLE.

MRS. MARY G. YOUNG, CHICAGO.

The Longwood Round Table for Child-Study was organized May 24, 1895, at the home of Mrs. Ella Hoswell, Longwood, Ill., an interest in the subject having been awakened by a talk given by Col. F. W. Parker, at an evening meeting held at Mrs. Hoswell's a short time before, and attended by many of the parents and teachers of the community. At the meeting for organization 26 members were enrolled, including mothers, teachers and a woman physician. The membership has since increased to 43.

The officers elected were: President, Mrs. Mary G. Young; Vice-President, Mrs. W. M. R. French; Secretary and Treasurer, Mrs. W. Burr. The latter soon resigned her office and Mrs. S. F. Laird was elected in her place.

The Round Table meetings have been held every two weeks on Friday afternoon alternately at Beverly Hills or Longwood and Tracy, the membership being about equally divided between these suburbs. An adjournment was taken during the months of August and September and at the holidays. In addition to the regular meetings several extra sessions have been held, two being in the evening that the fathers and others employed during the day might be present.

During the first part of the year the time at each meeting was filled by the reading, followed by a general discussion, of one of the syllabi, contained in the Hand-book of Transactions of the Illinois Society. Since beginning work last fall we have had addresses or papers followed by a discussion, entered into fully by nearly all of the members, from the following: Miss Sarah Griswold, formerly of Cook Co. Normal School, now Superintendent of Primary Grades at Austin, Ill., spoke of

"How the Mother and Teacher may be Mutually Helpful in the Study of the Child." Among many others she left with the Round Table members this suggestive thought, gathered from her experience with older children, that mothers be careful not to lose through lack of sympathy the golden key that unlocks the heart of their child.

Miss Ida Cassa Heffron, formerly teacher of drawing and modelling in this school, gave a most interesting and helpful talk on the value to the child of these various modes of expression, and urged that much encouragement be given by parents to their crudest, simplest efforts. This thought was still farther carried out and enlarged upon in such a way as greatly to interest and inspire both mothers and teachers, by Mrs. Frank Stuart Parker, who spoke to us some weeks later on "All-Sided Expression, an Absolute Necessity in the Development of the Child."

Dr. Ada B. Morgan, a member of the Round Table, read us one afternoon a most helpful paper on hygiene for mother and child, a topic always welcomed. Mrs. Gudrun Thorne-Thompson, primary teacher in the Normal, spoke at one meeting on Myths and Fairy Tales for children at home and in school. She told several stories to the mothers by way of illustration, and the talk seemed to bear immediate fruit, judging from the fact, that when I told one of them to my little boy, within a few days, he said, "Oh, I've heard that; Howard's mother told it to him and he told me."

Miss Belle Thomas, also of this school, spoke to us of "The Mother and the Primary Teacher," giving us much helpful, practical thought. This resulted in a visit of several mothers to the Normal and a closer observation and comparison of methods of instruction, particularly in the lower grades; much interest was expressed with a wish for added experience in connection with our own and other schools. We have also had an illustrated talk on Froebel's gifts by Miss Alexander, superintendent of Kindergarten work in the city schools, and Miss Amalie Hofer, one of the editors of the Kindergarten Magazine. These were particularly welcomed, and discussed by the younger mothers, who compose a large part of our membership. At our first evening meeting a most

acceptable paper was ready by Mrs. Jackman, President of the Normal Park Round Table, giving us much valuable information as to the present status of Child-Study in the state and country at large. Miss Anne Allen, at the head of the Kindergarten work in the Normal, read a paper on pets and playthings for children, and in a most kindly and helpful spirit answered the numerous questions suggested by it.

At the second evening meeting held by the Round Table we were addressed by Dr. Delamater, a well-known Chicago physician, his subject being "The Cause and Prevention of Nervous Diseases in Children." The central thought seemed to be that the cause of nearly all such diseases was the lack of self-control on the part of mothers, teachers and all those who create the atmosphere about the child, and the fact that he is not taught such self-control from infancy. He urged that children be kept at home and allowed a natural development until nine years of age. His apparent objections to Kindergarten and primary schools were that they hindered rather than fostered this, and allowed parents to shirk the responsibility of the child's training; but he thought the Child-Study Round Tables were a most important step in the right direction.

For the generous and helpful words of all these friends we are deeply grateful, and we also feel much indebted to those who have given us their thoughts through the medium of the "Child-Study Monthly," which has proved invaluable to many of our members, and articles from which have been read and discussed with profit at some of our meetings.

We have given a small portion of our time to the study of the first few chapters of Preyer's "Mental Development in the Child"; this we hope to continue. A number of the teachers from the Alice L. Barnard school and that at 95th street, are on our membership-roll.

We wish we might report more definite results; especially as to collections of data, etc., in which we know parents can be of great assistance to the state society; but we can report a most faithful attendance on the part of a large proportion of the mothers, most of whom have the care of young children and many home duties. A number of these have expressed

in writing or personally their appreciation of the benefits derived from the Round Table meetings and the help it has been to them in their lives with their children. A most earnest spirit has been shown by all, with a desire for more light and help. This must prepare the way for such intelligent study of the child as shall enable us in time to be a help to teachers and specialists. Dr. Krohn truthfully says that "the results of Child-Study are not meagre if the gap between the home and school is filled." The mother of average intelligence knows somewhat at least of the *materia medica* and general theories of the school of medicine whose physician she employs to care for her child's body, and has very decided ideas as to the theology that shall form his spiritual diet. But she gives apparently no thought to what or how he is taught in the school, where so large a proportion of his life is spent, simply turning him over to the most convenient one, as the farmer carries his grain to the mill, expecting it to return the finished product, while too often, as in the case of the grain, the nourishing, life-giving qualities are sifted out in the process. She does not realize that if this mental growth is carried on under right conditions, it must accompany that of the physical and spiritual side of the child's nature.

This all-sided development will be more sure to come to all children if parents not only visit schools on public occasions, when their children have some part to perform, or to criticize because said children are not promoted as fast as parental pride suggests, but to encourage and assist the teacher in their mutual work. This unity of thought and purpose on the part of mother and teacher will be a most helpful factor in the child's life. A superintendent of schools once told me that one of the greatest pleasures that had come to her in her work was when a little girl said: "I have two mothers—a home-mother and a school-mother. You are my school-mother." That this mutual work may be rightly done, both must have the right ideal, for, says one writer, "Co-operation with the school does not mean that the mother shall continue the line of work done in the school, but that she shall arrange the home life on the basis of certain principles which govern true education or character building."

Mothers, as well as teachers, need the inspiration that comes from the study of Pestalozzi, Herbart, Froebel and others, the great thinkers and teachers who have given their lives to the study of the child. Through their teaching and all that has been added and adapted by later psychologists, as well as by those who deal more directly with physical culture, mothers can become better acquainted with the laws which govern the child's growth and development. Says a writer in the "Outlook": "Mothers are learning not to accept the visible as the beginning and the end of a child's act, but to study the visible because it is an expression of the invisible; to recognize every act as a soul expression, a revelation often of disease and physical limitation. As a result of Child-Study the child of to-day benefits and the child of the future will still more positively be benefited by its researches."

One remark made as to the Round Table work was, "I do not believe in mothers studying psychology; they have not time for it and it will not help them with their children. We should cultivate the love or emotional side of the mother's nature." Another said: "Do you not think if a mother loves her child that is all that is necessary?"

One needs little observation as to results to see that the loving, sympathetic heart must be led and guided by the wise head. As one mother told me in my earlier experience, "We must give our children what they need, not what they want." The young plant may contain the germs for its growth, but unless given the right conditions by one who understands its needs, it may never bear the desired fruit. From the study of the individual child, we shall have our intelligence and sympathies awakened for all children and their needs, and to a more active interest in the educational thought and work of the day, more particularly to the problem of bringing about better conditions in the public schools. A father told me a few mornings since (and there are too many similar cases), that he did not know what he should do with one of his boys who is of such a temperament that it will be a useless experiment to send him to the teacher into whose grade he will pass the coming year. She is one who makes no intelligent study of her pupils and is apparently

devoid of sympathy for their requirements. He added: "We ought in some way to be able to get good teachers; in many smaller towns they send for any good teacher they may hear of, but so long as our schools are under political control there seems little hope of the betterment of present conditions." The free discussion of this and other questions is of great import, not only to parents who wish better conditions for their own children, but to all who recognize the great truth that the hope not only of our country, but of the race, is the true education or unfolding of the soul of every child.

MUTTERGARTEN CLUB ROUND TABLE.

MRS. WM. S. BATES, CHICAGO.

In the June of 1895, knowing nothing of Round Table associations, or of any systematized study of child-nature, two mothers who felt with me the need of more light by which to search our children's hearts, joined me in founding "The Muttergarten Club," to which we have this month annexed a "Muttergarten Round Table."

From three members we have grown to twenty or more; some of our meetings having been attended by as many guests when special lectures were upon the program.

We call ourselves "Muttergartners" because we believe, and act in the belief, that the mother garden soil should be prepared in every woman's heart, be she single or married, teacher, sister, or mother, before the soil of the child garden is broken; that it should first be sowed with the seeds of sympathy and affection for little ones, to awaken a realization of the Heaven-enjoined privilege of ministry to them, and to create a desire for fullest knowledge and guidance in the work. Then these seeds are to be cultivated with the teachings of Froebel and other helpful students of child-science, until they yield us insight, not only into child-nature and its needs, but into mother-nature and its weaknesses; until they lead us to the recognition of the vital truth that self control, self government, and the practical application of the principles taught in the "New Education" are as much a part of religion as the Ten Commandments. Upon the observance of the latter depends our own happiness in this life and in the next, but upon our understanding and use of the true methods for developing our children's possibilties to their highest perfection depends not only the mental, moral and physical, but the

spiritual and eternal condition of generations yet unborn. Is it not an overwhelming thought that the influence of our lives in their impress and action upon children is one of the great forces of nature? We all know that the most impressionable period of child-life is the three or four plastic years which antedate the kindergarten age, and it is this formative period, that, as a rule, is least considered by the mothers of the day. In our club we learn that the "Muttergarten" is the foundation of the kindergarten and should be firmly and carefully laid before the superstructure is begun, and in it we try to fit ourselves for the high, but alas, too often unrecognized or neglected, duties and privileges taught by Froebel's science of motherhood.

McCOWEN ORAL SCHOOL ROUND TABLE.

MISS MARY M'COWEN, CHICAGO.

In view of the whole program and the long exercises which we have all enjoyed immensely, but yet, I know, have been a little tiresome, I have not prepared any formal paper. I have jotted down some things which I am sure will be full of interest to many of you. Our Round Table was organized a year ago this month with ten members, all teachers of the deaf, except one, and that one a physician. Our work naturally has run along the line of work for the deaf. You have heard in your reports so far about working for children, some of whom are somewhat defective. It has been a hard problem for you. Our work has been with children all of whom were so defective that ordinary methods did not reach them at all. They were so deaf that to them this world of sound was a world of total stillness. Physically, morally and mentally, our problems have been just what yours have been. The difference lies in the fact that we had to find a new way of reaching the mind. It is a truism that it is only through knowing the wrong that we can know the right; that happiness means little or nothing unless we know loss and sorrow; and perfection itself is measured only by imperfection. We are sure that no one can begin to estimate the value of hearing until confronted with the question of deafness either in himself or in a little child for whose education he is responsible.

I have ventured to give a few statistics that may be of value as to the number of the deaf. I find those coming to our school invariably think we have a very large number. We only have thirty, while in the state of Illinois there is a school which has gathered together between five and six hundred.

Almost every state in the Union has a large state institution, where there are from fifty to five hundred children. Two or three of the eastern states have as many as five to seven large institutions devoted to the work of educating the deaf. Our school, instead of being large, is very small. It is a home school, not an institution, and the special feature of our work has been, from the first, that we have given our efforts mainly to the little children. Our early experience with the deaf led us to feel that one reason why results accomplished many times were not satisfactory, the main reason, was because the little child lost so much time. Successful teachers did wonders with them; but take any child and give it nothing, and you can imagine that condition of the hearing child, except those things that supply its physical wants. The deaf child eats, sleeps, plays, likes pretty things, but further than that his life is very little until he enters school. Imagine a child deprived of all educational influences until he is ten years old, and then the skill that must be used to give him a moderate degree of education. Until a few years since, that problem confronted the teachers of the deaf.

Twelve years ago our school was opened in Chicago, and we advertised to receive little children at five. That was a great innovation. It was thought a dreadful thing to take a child away from its mother at five. But we found that when we received one still a year younger it was still easier. The little child took up things more naturally. So we have been going down the scale, until to-day we say that every deaf child should be placed with someone who can give that child mental food (his mother, if possible, but if not, then some teacher) the very day the mother knows it is deaf, no matter what age. We believe this early work should be done by the mothers. We believe that the time will come when it can be done by the mothers. In connection with our own work, we are conducting a mothers' study class which we hope is a beginning toward the good time when mothers will know how to do what is necessary, and will do it for the young deaf child. Until that time, it is necessary for the best good of the little child that he should be in some school.

A home school is more nearly ideal for beginners, because

here only can the child get the true relation of language to life. In a schoolhouse, even if you have all the playthings representing the occupations of life, they are simply playthings. Having a cup and making believe drink milk is nothing like asking for real milk, and so on with all the language. If the little child is given language through its use in relation to his wants, it becomes a part of himself, and speech reading is his mother tongue. His education can then proceed as with other children. We find in the deaf child all the different conditions that obtain among the hearing children. Some are very bright, many are average, a few are stupid, some very stupid, and many feeble-minded. One of the most touching things we have to meet with in our work is in drawing the line as to which children can be received into our school and which cannot. One of the mothers on the platform here spoke of the unwillingness of mothers to admit that their children had defects. I must add that physicians are unwilling to tell the mothers. I have had but one mother bring such a child to me who said, "My physician told me so." The mothers usually say, "The child is weak"—not weak-minded. The physician has told them "He will outgrow it; don't worry about it; your child is all right." We have had mothers bring children to us thinking they were deaf, when it was no deafness at all, but an utterly different condition.

Since our own work is in its infancy, and is still in the greatest need, it might seem out of the way to make a plea for another class, but there is one thing I should like to say. There is a crying need for a special work in the city of Chicago, for a place—a school—which will qualify teachers who will devote their time to bringing out all the possibilities that are in these defective children—not the deaf children, but the children who are mentally defective, who are not able to acquire speech, who are not able to acquire an education by ordinary means. They are susceptible, as every teacher of the deaf knows. Any one who can teach the deaf can take any of these children and teach them to talk and a great deal besides that. The actual condition of these children seemed somewhat plainer to us after reading Dr. Donaldson's

"Growth of the Brain," which seems to indicate that apparent deafness may be present from a deficiency in the brain structure; the child may actually hear but not have the power to use hearing; that power may be cultivated.

One word now as to the cause of deafness. This is very important to mothers from the fact that a large per cent of deaf children are deaf from accident or from sickness, which is liable to come upon any child at any time. There are certain periods when children are more susceptible to deafness than others: brain fever, spinal trouble, diphtheria, whooping-cough are all very fruitful of deafness. Also a fall which results in spasms. A simple cold that settles in the head and perhaps causes a running in the ear is likely to produce deafness if not properly treated. Such cases should always be taken to a specialist.

In our club we have read books; we have made special notes; we have studied children; we have studied physical defects, and done the same line of work as in other circles; but there is one thing more than others that we have realized and that is that the mothers must be in the strongest sympathy with the school. Without the mothers we are only educating these children to throw them helpless upon the world. The home must come to us; we must go to the home; we must keep in touch with each other. I think it would be in order for me to make a confession on this subject, because in my early work I saw the child without the mother. I studied all the possible means of getting at him and forgot the mother side, the home side. As the older children went out into the world, we began to realize that they stood alone, and could stand alone only, unless we kept them in touch with the home, with their home friends. This has influenced our work so much that while once we believed that only the best work could be done in a boarding-school, we now believe that only the best work for the child can be done in the school which is near enough the home to permit the child to go there frequently, or to live there.

One other point with reference to a large class of so-called deaf children, who are really too deaf to gain language through hearing, and who yet have a certain degree of hear-

ing. These children are capable of acquiring an education much more rapidly than the totally deaf child, and much more efficiently. With special attention they may be given a good education. There is another class of children who are possibly becoming deaf, losing their hearing gradually; if these children are given speech reading, which means the ability to read speech from the face without any hearing, it is a great boon to them and in a large number of cases will enable them to continue their educational work with comparatively little disadvantage.

GRAHAM SCHOOL ROUND TABLE.

PRINCIPAL W. E. WATT, CHICAGO.

There is something in my school that I would like to explain to you, how it got there and what it is. I will make an attempt. Miss Locke explained it when she carried you up to the point that beauty and harmony will make you intelligent and wise. Beauty and harmony will make you more—will make you happy, which is more than all the rest. There is something in our school to-day that is different from what we used to have there, and it got in in a peculiar way.

I believe, in as far as I have been able to study psychology, that I have discovered one thing that you do not know, any of you. I believe there is no healthful growth of the mind except that which comes through an activity which is moved by happiness. I believe that all the growth of the mind that is worth anything to the mind afterwards comes through an act that is a very happy act at the time. (Applause.) I am glad you feel so good about that! There is some growth in the dark. You can find moist warm dark places where things are growing, but the sun brought the warmth and the moisture there. Sunlight produces all growth in nature; all life comes from the sun, and so it is that all growth comes through beauty, harmony, happiness, through the desire for a thing which is being possessed just at that moment.

Our people are beginning to find that out in the school, and it has prompted a sort of kindness on the part of the teachers. Three months ago, a parent said to a teacher, "I wish you would scold this girl; make her learn her lessons; be severe with her." The teacher said, "I will teach this child, but I will not scold any child." The child is going to grow, if we furnish the conditions of growth, and those conditions

must be pleasant conditions. The child wishes the thing; we make ready the way that gives joy, and that joy is attended with growth. We are getting men and women much faster than when we said we were going to make the child know this much this minute, and so much more the next, so that when he got through he would hold all the dry bones. We are about through with that sort of thing. Child-Study has come to rebuke that sort of thing, and it will pass away eventually.

Another thing I would like to say, but I am afraid you will not understand me. All of the teachers in our school who have been reading the works of this Child-Study organization, who have been thinking the thoughts of the child students, and have been actually taking the little folks and looking at them to see what is in them, have found that it is not necessary that a teacher should spend her time thinking affectionately towards the children, but that by looking into a child's nature and watching him grow she gets into a sympathetic relation, so that she can furnish something to grow on. It has come to mean so much sweetness in the school room that it has sweetened up the lives of some of the teachers themselves.

FROM THE GENERAL DISCUSSION.

JOSEPHINE C. LOCKE,

SUPERVISOR OF DRAWING IN THE CHICAGO SCHOOLS.

What art can do for Child-Study, and what Child-Study can do for art. Somebody said this morning that it was not the investigation of the old, or the reconsideration of the old, but the bringing in of a complete new order. The new order is here, and the investigation we are making is simply the opening of our eyes to what if we did not investigate we should refuse to believe. "A little child shall lead them." I am perfectly convinced that a little child is leading us. It is not for the child's sake; it is for our own sake. We are going to find that back of this speculative, statistical creature, there is an unknown quantity, and when we find that x, we are going to find the new order. It is not information that makes intelligence; it is a good-will. I am persuaded that it is not the brain that is the vital factor of the human being, it is the soul. The child is soul and not brain. The soul does not argue, the soul does not analyze—it knows. The soul does not speculate, it accepts intuitively, and goes to work and does something. Tennyson puts it in a nut-shell and calls it "beauty." Beauty—that is all; we cannot tell anything more about it. When we come into the presence of the real things, we get all this rubbish put aside. We discover that the heart of nature is sound and the heart of nature is beauty, and what is beauty? Simply an expression of harmony. When we get to the harmonious condition, we are bound to show forth that beauty.

A little child is leading us. Go on with your mathematical statistics, you will get through with them after a while. The vision will descend some time, and you will see the Holy

Grail. And away goes the whole business! I am a heretic, and plenty of others here are. This is the trouble—we have been judging the child from the standpoint of the adult. Who is the adult? He is the prodigal son of nature, who has wandered into the land of intellect. The child is a pure bundle of sympathies. The child sees everything relatively. He sees it as a cosmic whole. He sees everything in action, life, light, movement. We tear it all up, take him with us, and lead him away from that to the swine!

The new order is an order towards synthesis, towards the establishing of relationships, and when we get relationships established, the whole order will change. This movement is towards synthesis. We, being prodigals, have to work our way back painfully. The child of the future won't have to do any such thing. We have got to work our way back.

Read "The Nature of Fine Art" in the "Lotus." The whole story of the Boston Public Library is but a prophecy of the latent love of beauty, of the latent power of art, of all the innermost feelings and most holy aspirations of the American people, which they have not dared to utter. The Holy Grail is right around us, and we refuse to recognize it.

REV. R. A. WHITE,

PASTOR UNIVERSALIST CHURCH, ENGLEWOOD.

I have had no time to think about this. I shall speak on the impulse. I should say that the kindergarten may and probably will revolutionize the church. I think first it will revolutionize its methods. The method of the kindergarten is simple, direct; it is natural. The method of the average church, from the Sunday-school throughout, is unnatural and stilted. I think the kindergarten will benefit the church when we institute kindergarten methods in our Sunday-school system. I am a heterodox clergyman, and I am especially heterodox about the Sunday-school. I do not believe the average Sunday-school is worth the time put into it, because the methods are all wrong. I am looking forward to a time

when the kindergarten teachers will be a little less selfish than they are now, or a little less overworked, and can give the churches in their vicinity enough time to transform and revolutionize Sunday-school methods. When all the lower grades, at least, in Sunday-school work, shall be modelled upon the kindergarten system, then we shall have practical kindergartens in all classes.

The kindergarten love, the kindergarten spirit, that is manifest not only in the lower kindergarten classes, but all through the modern school system, will not only revolutionize the methods of the church work, but will revolutionize the mental attitude of the church. The kindergarten deals with present things; the church deals too largely with past things. The kindergarten deals with nature; the church deals largely with books. The kindergarten inspires and stimulates original observation and research; the church holds up a creed that was formed four hundred years ago. The kindergarten deals with modern things; the church shows you the miracle of the past, while the kindergarten shows you the miracle of the morning and evening star, the beauty that God paints in sunrise and sunset. The church takes you away back 1,800 years to show you God; the kindergarten trains the child mind to see God in the blue of the over-arching heavens, in the silent march of the stars by night, and God becomes a very present God. The church teaches us ethics by turning our minds back into the past; the new methods of education teach us to interpret ethical systems and find their meaning in our daily life. The child is learning ethics as it stands face to face in relationship with its fellows.

Lastly, what can the church do for the kindergarten? First of all, every church that stands in a community where public schools or private kindergartens are not supplying demands, should have a kindergarten five forenoons in a week in its church edifice. Have it in the vestry, if you want, if not in the church, and if the seats interfere, put it on the platform, and dedicate the platform to the children. If you cannot do it in your own church edifice, go into some poorer quarter and start a kindergarten there. You will be surprised to see how children flock to it.

I am glad to look into the faces of these teachers, and as a representative of the church, speak to you, as representatives of the modern educational system, for there is a vital relationship between your work and my work, but which neither church nor school yet recognize. I am an educator, you are educators. You lay slightly different emphasis upon what we attempt to infuse into our churches; we perhaps emphasize that which, in a measure, you are obliged to make a little bit subordinate and incidental. But, after all, teachers of the public school, the church and the school are working simply for the same great common end, which is to make great, magnificent, sympathetic, broad-minded men and women.

DR. JOHN W. COOK,

PRESIDENT NORMAL UNIVERSITY, NORMAL, ILLINOIS.

I trust that the Sunday-school is not to continue to be the last place into which reform methods in instruction shall find their way. But in order that it shall not continue, I trust that the churches will not depend upon over-worked teachers of public and private schools to go into the churches on Sunday to do the work that ought to be provided for in some other way. Our teachers are altogether too unselfish already, and I would suggest that one great movement which should possess the church is to provide regularly paid employes who shall not only go into the pulpit for the instruction of adult members of the church, but also go into the Sunday-school for the purpose of introducing the finest methods of instruction among the children.

THE METHODS, STATUS, AND PROSPECTS OF THE CHILD-STUDY OF TO-DAY.

INTRODUCTION.—PRES. JOHN W. COOK.

Ladies and Gentlemen: I think you will agree with me when I assert that this meeting or series of meetings is destined to be historical. We have known nothing of this kind before, at least I have not, in the history of my connection with the school interests of Illinois, and I hardly dare say over how long a period that has extended.

It is a common remark among you—the remarkable, sudden development of this unparalleled interest in Child-Study; it seems to have sprung into active life, mature manhood, in the course of a few years. It is not often the happy fortune of one who has been interested in the inauguration of such a movement to see it reach such a remarkable degree of vigor and success within so short a period.

It is our equally happy fortune to have with us here to-night the man who more than any other man had to do with the inauguration of this movement, and a man to whom more than any other man we shall look for guidance.

I shall not detain you with any extended preliminaries, but shall immediately introduce to you, as I do with great pleasure, the lecturer of the evening, Dr. G. Stanley Hall, President of Clark University, Worcester, Massachusetts, who will address you on "The Methods, Status and Prospects of the Child-Study of To-day."

DR. G. STANLEY HALL,

PRESIDENT CLARK UNIVERSITY, WORCESTER, MASS.

Ladies and Gentlemen: I cannot forbear at the opening of my discourse to express my great pleasure and my in-

debtedness to those who have taken part in this congress. It has been my unexpected pleasure to attend every meeting and to hear and make notes upon every paper. I cannot forebear repeating what I said to Colonel Parker, coming up the stairs to-night, that I think I have never learned so much that was new and important to me in the same space of time, as I have during these remarkable four days. I am quite sure that this meeting is not only to be historical for education, but it is perhaps better fitted than any other event to mark a distinct turning point in all those studies that deal with the human soul.

My discourse to-night will be a plain, homely and informal attempt to state a few more of the main factors, methods and results of this movement, with rather especial reference to the scientific side. As I look at it, we do not have to go very far back in the history of education in this country to find that uniformity was the dominant idea from the kindergarten to the university. In the early days of the colleges and in the inception of the high school, the movement under Horace Mann, and in the days of the old academies and grammar schools, the dominant idea was to get a course that would uniformize young Americans, make them intelligent and better citizens. There was almost no reference—and I look in vain for such reference even in the works of Horace Mann—to individual work with students. Equal opportunity was the chief idea; differences of talent, a very secondary consideration.

The beginnings of the movement, the fruitage of which we are now witnessing, I think, may best be traced back to the dawn of the elective system so-called. That method met with great opposition because it attempted adjustment to individuals. It stimulated every college, where it was introduced, and it entered almost in direct proportion to the wealth of the college. There never was any such method of stimulating before the dry-as-dust professors that get into every faculty, as the elective system, because the bright students dropped the dull professors. That system gradually spread from colleges downward, and now there is no academic institution, and very few high schools that have not, to some extent, introduced this method. It is working its way as a most whole-

some leaven everywhere. I had occasion a little while ago to look up the number of degrees given in American colleges, and found fifty-two fairly distinct degrees, most of them products of the elective system, and these did not include the professional degrees.

I am inclined to think that the growing predominance of women among our teachers, who, in some states, notably my own, constitute ninety per cent. of the teaching force, is bringing in this individual method, which is the women's method. I think a woman takes more interest in individuals and is less interested in running the machinery and hearing the click of the apparatus of the school than a man. We know that it is a work of salvage in a great many cases. How many young men and young women, how many dull boys and girls, under the old method, would have left school as stupid as they entered? We had, as you know, first the old memory method, which educated a little spot of the brain about as big as my thumb. Then, under the object-lesson method, another larger area in the back of the brain was educated. Then the manual methods, which brings in an area on both sides of the brain very roughly speaking half as large as my hand. But we are gradually educating the whole brain, and this elective system allows those who have one part of the brain better endowed than others to make a livelihood for themselves and win distinction in their special careers.

It is a very different thing to teach nowadays from what it was when teaching consisted in instilling by methods of force a carefully prepared culture, narrow in its range at best, and the same for all.

I think, on the whole, the methods we have heard described these past few days may be put into two general large classes. The first one deals with the individual alone, and that brings into view an aspect of this topic which is largely outside our ken as teachers. It is not a movement represented chiefly in the pedagogical field, it is a great movement of science. As examples of the individual method, take the study of Laura Bridgman, and the studies now made of Helen Keller. We have a new era of individual psychology in insanity. We have now a great deal of individual psychology of lunatics—

pamphlets, volumes, devoted to single cases. In physiology this individual method we are attempting has also been well established within recent years. You have all heard of the German professor who put his own daughter in a glass case, and kept her there for a short period, studying and measuring the air she breathed, food and drink consumed, all bodily excrements, etc., and made discoveries hitherto unknown with regard to the physiology of nutrition. But it would take a whole evening to do justice to this subject of individual physiology alone. Anywhere anybody who will concentrate upon any individual form of life will find opening to him a new mine of richness.

Individual plants have been studied by the same method. Apparatus has been made by which it was possible to isolate an individual plant, observe its entire growth, and tell everything about it—its roots, nutrition, etc. This method gave new life to botany, so different from the old classification method. As this goes on, we are coming to understand many things.

We have no biographies of great men in their childhood. That whole department has been neglected in almost all the best biographies. With regard to medical laws relating to children's diseases, pediatrics might also be called a new topic. We are now having a renaissance in this aspect of the studies of diseases, and this again is a topic which would take a whole evening to give a good account of. So with regard to every aspect of life. A single thing studied completely really makes a science. As a poet says:

> "Flower in the cranied wall
> I pluck you out of the cranies—
> Hold you here, root and all, in my hand,
> Little flower—but if I could understand
> What you are, root and all, and all in all
> I should know what God and man is."

We find the individual contains all the secrets of the world; it is a microcosm; everything is there. It is indeed the method of all the sciences that deal with life. A friend of mine photographs his children every few months, takes a straight front view at the same distance from the camera, and then puts the pictures in a gyroscope and literally sees

the child grow; the little face gradually gets individual character and you can see it grow. A great many mothers and fathers are keeping life-books of their children. It is a work of love. It makes love no longer blind, as proverbs have told us it was, but takes off the bandage, brings to love science, knowledge, wisdom. Froebel recommended that every parent open a life-book when the child was born, and that this book should be kept day by day; desires, wishes, records of diseases—the family physician should make his notes in regard to constitutional predisposition to disease. At last, when the child went away from home, or reached maturity, if this book was given it, it would be the most sacred kind of bond between parent and child. When the child read it, he would have self-knowledge attainable in no other way. Such an album seems to me to be the very best kind of an inheritance that a wise parent could possibly leave to a child.

Second, there is another method of studying children which in a sense cross-sections this. This was begun by the topical blanket syllabi, illustrated by the one Sully circulated a year or two ago, in which he took all the important questions he could think of and asked everybody to answer them. I have had experience with that kind of a syllabus. I never got one single usable answer, although I circulated something like fifteen hundred copies. This sort of blanket kind of questioning does not work. We are coming to the study of single points. This is illustrated by a series of thirty-two syllabi issued from Clark University. We have one little syllabus of a page or a page and a half or two or three pages, on a narrow special topic—for instance, children's fears. Everybody has suffered from fears, and we ask people to record what they recall of their childish fears. Mothers know the fears of their children and talk to them, and talking about them removes fears. These fears we grow up with and without our knowing it our dearest friends suffer from them all their lives. A friend of 40 told me she had never passed a day without looking under the bed at night. Her own cousin had done the same thing. Neither knew it of the other. When they were together, neither of them did it. So a fellow-feeling in this respect gives courage and removes fear.

Then, we have taken up the topic of anger, a most marvelous and interesting phenomen, a kind of epilepsy. When you have a large number of returns recording symptoms, how children act when they are angry, when you have a few thousand of these returns, you can get a good idea of how it feels to be thoroughly mad.

Dolls was the subject of one of our most fruitful syllabi. The general purport of our study in this direction is that a plain doll, especially for small children, is better than one of these elaborate wax affairs that opens and shuts its eyes, talks when you press the button, etc. Simple dolls, a doll consisting of a bag with a string around it, give the imagination something to do, whereas a fancy doll leaves very little, although they may stimulate some human feelings. One thing we have demonstrated is that excessive doll cult among children, necessary as it is, if carried too far, makes these mothers, when they have children of their own, treat their children as a set of little prigs and dolls instead of real, live children. It cultivates what the Germans call *Affenliebe.*

One syllabus was given to children's feelings about the stars, sun and moon. Moon lore is the richest of all we found from that particular paper. Their feeling for flowers, for the sky, the wondrous things their imagination builds of the clouds, and all through the whole category of objects in nature, were a revelation. The child is one with nature; and if the school does not get between the child and nature, that love is the basis of a great many, if not all, of the very best things in the soul, if allowed to grow to full maturity.

So with laughter and joy. On the whole, this is one of the most interesting of our topics, because laughter is one of the most primeval of all activities. A laugh, when we throw off care and give up all repression or inhibition and restraint that custom has given us, and shake the diaphragm, throw back the head, takes us back thousands and tens of thousands of years to that happy paradise where there was only joy. I wish there were time to explain what a laugh really does. It sends the blood out of the arteries into the veins. There is no tension in the veins, no energy lost, and the whole system rests.

Another paper sent out was in regard to toys. The feeling of shame, feeling of pride, awkwardness, are others. Teasing, also, which is one of the most rudimentary instincts, goes down to the cats and dogs and other animals which tease each other. The "showing off" instinct is another which is very rich and primeval. Studies of peculiar and exceptional children; fancy and imagination, blushing, imitation, dreams; and, finally, we undertook to get out four or five syllabi which should attempt to apply these to school work. The first of these syllabi related to the study of music. We are at work now upon drawing. Then one on the Kindergarten, in which we had the very efficient co-operation of Miss Bryan here and Miss Lucy Wheelock in Boston. It has the very best things in the whole educational system in it. Such little things, for instance, as the sneeze, the yawn, are very interesting from the scientific point of view. Earl Barnes has done exceedingly important work of a somewhat more practical kind than ours, has dealt with larger numbers, focused his endeavors upon narrow problems. Dr. Russell, of Worcester, has thirty-seven thousand returns on imitation.

This method has been criticized. Of course, we get returns practically worthless. There are many tests no one but an expert psychologist can make, but the criticism that all tests are worthless unless so made is absurd. English, Italian, German and French scientists have prepared books directing travelers, missionaries and traders to make certain reports about savages, and this material is the basis of a good part of anthropology of a certain kind. So, in regard to the study of animal instincts, a great deal of investigation is now being made under the control of experts by hunters and trappers. Anybody can make these observations if he will simply use the methods that are suggested. When these returns come in, one at first feels helpless before them. We have now at least a hundred thousand returns, some of them comprising forty and fifty pages of manuscript. Statistical methods have been used, and the very best trained statisticians have to be employed, and we have no money for these. We have kept four people at work off and on for nearly a year, and I think we shall have nineteen of these topics finished for our summer

school in July. One has carefully to feel a way of getting out the wheat from the chaff in these returns, and then you get the pure gold of human life as it is really lived.

At this point, let me speak of a very few of the practical results. I have felt that we should go very slowly, indeed, about stating practical results until thoroughly established. I believe we are going to prove a few things which are already in sight. First, with regard to writing, I believe that we are going to show, and have the data all ready to show, that we put children to writing two years too early; that by anticipating nature in this respect we make bad writers and that there is a natural period for writing. We all know that there is a "school hand" that appears at eight, nine or ten years of age, that there is no individual character to hand writing until the child begins to be an individual character, and just before that time, I think there is reason to say, there is a definitely indicated time when the stress of school work can be laid on writing. Besides that, writing as we teach it, violates a fundamental law, and that is that large movements and the use of large muscles should precede the finer. If anything is established, it is that great fundamental law. There are very large muscles that move the shoulders, the elbows, back, hips, etc., and those muscles as an whole come into use under the control of the will far earlier than the finer muscles that move the fingers and features. Let us call these first the fundamental, and the fine muscles, the accessory. We must begin with the fundamental; that is why it is so very important to begin to write a little with the elbow and shoulders. Large movements should precede the small movements everywhere. That is why writing should come a little later than it does. Chorea is caused from work with the finer muscles, for instance, in the kindergarten, putting a needle through a prepared hole, which is very different from making the hole with the needle. The little muscles are the thought muscles, and if anything is done wrongly with them, thought is interfered with. Prof. Jastrow has brought out these points in his experiments.

Drawing should precede writing by every physiological law. So with regard to all automatic movements, they are

very dangerous if carried to excess. We have ninety-six of these automatic movements that Mr. Lindley has been carefully studying this year, showing how easy it is for children to get these habits of chorea by being forced to this unnatural work.

With regard to adolescence—there again we have a great law thoroughly established, if anything in the world is established, and that is that at that period the whole nature of education must change and appeal to interest if it never did before. There must be drill, do not forget that, some drill is indispensable, the most mechanical kind of drill. Every bit of reason and explanation is utter waste of time with regard to certain things. There are some things which have no reason for being so, that young people can see; they stultify the teacher's reason and the reason of the child.

With regard to religion, we have demonstrated that you cannot teach a child to love God, you cannot teach a child religion from anybody's standpoint, you cannot teach Christianity effectively and well unless you have allowed the child to use his natural instincts, to love and reverence trees, stars, the moon, flowers.

I suppose, if you were to take the votes of the greatest number of scientific men to-day, as to what is the most important scientific instrument, the microscope would get the most votes. It has enlarged everything; everything has been broadened out scores of diameters. It has brought into existence a half dozen new sciences of things no naked eye ever will see. What is it that most of the microscopes that have the eyes of investigators behind them are turned toward to-day? Towards the development of the individual from the single cell up to full maturity. Every form of life began as a single cell, that cell dividing into two, each of these dividing, making four, and so on, until you are able to detect certain features by which you can tell the peculiar form of life. Now what do we see in this marvelous history? We see that you and I and all of us have repeated all the stages through which life has passed since it began upon this globe, that you and I began as single cells. We have repeated the earlier stages of growth with rapidity, living a thousand years in a day, or perhaps a

minute, but we have gone through all the stages of life since life began on this globe. We have now in our bodies plenty of traces of this rudimentary animal origin; the gill slits, bearing indelible evidence that we have been aquatic; the tip of the ear, and all the others of the seventy-two rudimentary organs, every one of them show where we came from.

The miracle of the universe is in the great push that has unfolded all these things. What is that great will to live that pushes everything up to its fullest capacity? The studies of nature have taught us a great deal about this. With Child-Study, I claim that evolution enters for the first time the realms of the human soul; we pass out of the body into the mind, and we stand, to-day, just at the dawn of an epoch just as important as that marked by Darwin. This view is my own, and I fear shared as yet by no one else, least of all by my fellow teachers of psychology.

Now, if I may be very homely and put my text in the middle of my discourse, I should like to take as my text, "A Parable from the Tadpole's Tail." There are some here possibly who have actually tried the experiment of snipping off the end of the tadpole's tail that the hind legs might grow faster. Now, no tadpole's tail ever dropped off, in the world; it is absorbed into the body and the hind legs. If you cut off the tail, the growth of the legs is arrested. It is necessary that the tail have its fling, as it were. What would you think of cutting out the seventy-two rudimentary organs of the human body? It is just the same with the rudimentary organs of the human soul. You will all recall the case of Dr. Robinson and the babies, how he hung new-born infants on a bar above the bed by their hands, some of them clinging there five, ten, and the longest, seventeen, minutes, a thing no adult could possibly do. This is because our ancestors had to cling to trees or their parents to save their lives. These muscles are very strong at birth, and weaken later. The mind is full of rudimentary organs. Let us take, for example, the fear of fur among little children. We have two hundred twenty-three cases which show that children during their first year of life have an instinctive fear of fur. It is not because they see it, but be-

cause they touch it. They sometimes have fits if they touch it. It is touched, and there is some apparatus there which causes convulsions in a child who touches the fur. Another common cause of fear is big eyes; making big eyes at children frightens them. Why should a child be afraid of big eyes, of an owl, for instance? Another terror to a young child is a great display of teeth. If the teeth are false, and show a slight motion, the fear is very manifest. How can we explain such things? I venture to say, you may perhaps say it is mere inference, but I am persuaded, after a careful study of this, that here we have some of the oldest things in the human soul that take us away back, so we can call these fears rudimentary organs—the tadpole's tail, again. This at least is my conclusion, although I do not know that any one else in the world ever thought so. These fears are traces of a long struggle which we know the human race went through with animals with big teeth, big eyes and fur, that were sometimes threatening to exterminate the human race. That fear has been transmitted and has survived, and so, I believe, we have in that case a rudimentary organ that goes away back in the history of the soul.

Take the case of certain ducks that migrate across the Mediterranean Sea, some of them always going over the exact place, each duck going over the same road, and very often, it has been found that they go over the very widest places in the Mediterranean. The wide sea spaces are very dangerous for all migratory birds, as they are liable to be blown out of their course in a storm and perish. No one knew why these birds did not follow land in their course, and it was not explained until the geological bed of the Mediterranean was ascertained; then it was found that these ducks crossed the sea where there had been land geological ages ago. *Their instinct was older than the present geological formation of Europe.* Therefore, you see, if this is true, and there are plenty of parallel cases of this kind, we have to go away back and get a distant perspective for our studies of the mind.

We found that women fear most, have a little more than twice as many fears as men; whether women are more timorous or more honest in reporting their fears, it is impos-

sible to say. Certain it is, that the ages of twelve, thirteen and fourteen seem to be the ages of the greatest fear.

Among all fears, the thing most feared by six thousand cases is thunder and lightning. Many of these cases referred to have no fear of disease or death. When you look at the death census and see that the deaths from thunder and lightning are but a small part of one per cent. of the entire number of deaths, this will seem peculiar. Aristotle advocates fearing those things most to be feared. He says that that constitutes an educated man. We have not reached that point, if these returns are representative.

With regard to automatic movements, a great many of these go back to a very early period. We find, as I have before said, about ninety-six of these movements, pretty well differentiated. I know a most distinguished gentleman, and I can always tell whether or not I get his ear, by his taking out his keys. If he takes out his keys and begins to finger them, I know that I have his attention. You know Coleridge had a habit of taking hold of a button of the man he was talking to. Lamb tells that one time when Coleridge was talking to him, he cut off the button and went home. An hour later, he went down town and found Coleridge still holding the button and talking. We have examined some fourteen hundred cases of idiocy and among them we find a great many of these automatic movements. One very bright intelligent girl — that is, for an idiot — fell into the habit of rocking, rocking more and more violently. She is wearing her strength out, and is likely to die from exhaustion, because this automatic movement has gotten the better of her. Most children, when they begin to write, move the head more or less, and certainly, if they get a little fatigued, stick their tongue out and move it from side to side. The danger is that these automatic movements will be kept up too long. A great many trades have their own automatic movements. It has been the boast of a recent physiologist that he could tell, if he saw a man walk or sit still, what his trade was by the automatic movements he made.

There is one topic I cannot forbear speaking of. It appears in a new aspect, it is a vital, practical, important theme,

the topic of adolescence. One or two things are now well established. In races of mixed blood this period is greatly intensified and its dangers are much greater. Take people of pure blood, like the Germans or Jews, for instance, and you have this period well marked, but the change is rarely dangerous, less dangerous than with the mixed bloods, and it is practically sooner over. We are rather a mongrel race on the whole. I have three rather distinct racial strains in my blood, going back six generations. This adolescent period draws upon heredity. A child may resemble the father or mother up to that period, then traits of the other side of the house begin to appear—grandparents and great-grandparents. Heredity comes in at that period. It is the time when wider relationship with ancestors are seen. Our relationship is very wide, and a great deal depends upon what is called "breeding true." If the father and mother are too different, there is always a slight lapse. On the other hand, although mixed bloods prolong this period and intensify its dangers, they open a larger possibility of a higher race in the end as a result of it all. I do not know any better philosophy of education; if you take the whole thing as a philosophy, there is no better philosophy of education than this. Everywhere in every country, savage and civilized, education, with exceptions that can easily be accounted for, begins at the period of adolescence. There is no savage race that does not, at that time, bring its most solemn ceremonies to bear. It seems as though our forefathers, the teachers of youth, the preachers, in this country, have anticipated blindly this point of greatest danger, and have felt that it was necessary then, when the strongest of all human instincts is awakening, before powers of control have been given, that all the assistance religion and ethics were capable of should be brought to bear. It is regeneration. Here is where education begins its most important point. I want to repeat here the cardinal principle of my own philosophy of education. *Education begins everywhere during early adolescent years*, and widens *upward toward the university and downwards torwards the kindergarten in proportion as civilization advances.* That is the central point of it. This period Clouston makes ten years—some make it longer—

before absolute maturity is established. These ten years of regeneration are the sacred opportunity of the educator.

The whole thing, I think, sums up in this. *In Child-Study, evolution enters the soul. It cross-sections the other previous lines of endeavor.* It puts us in rapport with an aspect of the soul, which shows its depth as well as its surface; it gives us for the first time perspective, and holds out some hope that we may be able to draw up some table of the relative age of the primitive instincts and deeper things of the soul. It shows us that we have over-estimated the effect of mere intellectual culture; that, important as the intellect is, there is something back of it and deeper.

CHILD-STUDY AND THE SLUMS.

DR. GRAHAM TAYLOR,

CHICAGO COMMONS SETTLEMENT.

The children of the slums, of all these great congested industrial districts, are very much like other children, only more so. The boy is a boy wherever you find him. Access to these children is more through the tips of their fingers than through their ears. The average boy will not listen to you, no matter what you say to him, perhaps more than five or ten minutes, but is perfectly tractable if you give him something to do with his hands, and at the same time interest his brain in that which he is doing with his fingers.

We are also learning that the hoodlum of the slums is the product of his environment. We build a city, especially the central portions of it, absolutely ignoring the child-life, that without its own consent or choice, is born into it. My philosophy and my religion are at an end when I think of that accident of birth; but, fellow teachers, my activity is only at its beginning. If I do not know what to think or how to feel about it, there is one thing that God has not denied me—I really know what to begin to *do* about it. We cannot change this environment; we cannot interfere with the order and the march of nature, against which both Pestalozzi and Froebel warned us, but we can, at least, let the little children of the city centers play without being arrested; we can give them a place to play other than the private property upon which they must trespass in order to be boys. Said some little fellows to me the other day, when they were making that disorganizing kind of noise which sensitive nerves cannot stand, and I told them they must be quieter or leave the premises, "If you drive us out from the Settlement, we have not even a place

to stand up on," and it was God's own eternal truth of man's inhumanity to boys. I feel more deeply than my tongue can tell the infinite pathos of child-life in the centers of the city. It seems to me the way we treat or neglect our children will surely bring upon us the penalty of neglected life.

Should it be possible to find a second one of those children described by Justice Richardson of the Harrison Police Station, after he found the first one? He says: "Of forty per cent of the boys brought me, I cannot find father or mother, or permanent place of abode"—and that in this city of Chicago. Should it be possible that the warden of the Bridewell should have to say a second time what he has been saying for years and years in regard to the indiscriminate massing of little boys and incorrigible criminals in the same cell at the police station, in the same patrol wagon on the way there, in the same prison pen, in that place we call the house of correction? Should he need to call the attention of a humane, civilized community to these awful facts more than once? He has gone on for years and years, until he told me the other day, when I was taking a group of students through that place, "The less a man thinks, here, sir, the better!"

I must say one word in regard to the public schools down town. It is the last citadel of our civilization. It is the outpost of about all the religion and all the humanity that is left under the iron heel of our commercialism and our absolutely false and dehumanizing industrialism. I revere as I revere no other function of the great social organization the function of the humane teacher, for I see in her, perhaps, more of the mother instinct than I see in many, many of the parents. I do not know what we are going to do to rally something more of the humanity in these great districts in our city. We have some little glimmer of hope in the social settlement with its permanent residents of a little group of people who have not sold their souls out to making money and to being where they can *get* the most instead of being where they can *give* the most. They are establishing little centers around which gather the school teachers and the ministers of religion that still remain and the better elements from those surround-

ings; they shall yet constitute little nuclei, little ganglions of the nervous system of the body politic, which shall have some communicating power with those motor centers we hear so much about, and with the muscular system, and bring about some sort of readjustment and change.

One cannot live there very long, one cannot see these things going on, one cannot see that most pathetic tragedy of birth, without being moved profoundly. We are to do something more about giving folks a better chance to be born the first time, perhaps, as the basis for even that great, great doctrine, that Professor Hall has been speaking of, of the second birth; but I tell you what it is, I really believe that we have got to pay a good deal more attention to generation if we pay no less attention to regeneration

The pathos of the child of the city center overwhelms the heart. I wish to make simply one plea, and that is that the child shall have one little chance now and then to put his foot on the earth, and to get one touch that will supply the famished heart in its love for nature. If you want to know what that is, come with me with a little bouquet of flowers into any of these river wards of Chicago, and attempt to pass along the street and carry those flowers out of the ward. At every few steps you will be besought, "Won't you please give me a bud?" If you want to see the nature love that has been talked of here bloom and blossom, give a little plant to one of those poor little children or to the mother. These Italians will bring you a little box and beg a few handfuls of earth and a seed or two to plant in it. Take a little child that is cooped up in the school-room all day and, when it is turned out, has no other place to go; take it to one of these meadow-like lawns we have here in this city, and see the response you get. Eighty-seven little kindergarten children were taken, at the invitation of some souls that must forever be happier, to Oak Park. When they alighted from the electric car, the first thing they did was to lie down in the meadow grass and roll. Every one of them came home with great bundles of weeds and dandelions, the most precious of their treasures. If you place before these little children a package of candy and a bunch of flowers, and let him choose,

a very considerable proportion, when they know they can have but one, take the flowers.

It seems to me one of the greatest crimes on earth to build new cities on these prairies and then not to reserve a square yard, almost for square miles, from the greed for private property, on which a little boy can play ball, or a little girl can see a spear of grass. Why will we go on practicing these dehumanizing abuses which have made countless thousands mourn in every city in the old world; allowing here in Chicago what New York is now trying to get rid of—the rear tenant; putting two houses on one lot? In the name then of common humanity and the great Father of us all, will not you teachers, who, it seems to me, are coming more and more to hold the very key of the situation, the interpreters of the child to its mother, interpreters of posterity, will you not plead for the larger social function of the public school? Will you not plead for buildings with gardens about them, or at least a roof garden? Will you not allow some space where a child can come to school a little early and can stay a little late after school without being driven away?

Let me tell you that the park system of great cities is of great service. But if you had experience in pioneering little park parties, you would find that something else is needed other than putting parks in the best parts of the city, and keeping them away from parts where there are not even backyards. Take a little group of children, ragged, without shoes, as we took them to Union Park the other day. A well-dressed man appeared on the scene and asked the lady who was with this party, "Who are these children?" "They are school children, sir." "Can't they dress better than that when they come up here? If I brought them I would see to it." And that was in democratic Chicago! Take a party of Italian children to Lincoln Park, and the American boys will do what no other boys would do to them. They will follow them about and say, "See the woman with the dagos!" until the little gladness of their red-letter day is shadowed by the abuse to which the poor are subjected.

One other thing. I do not think that we ought to stop with the child in the social function of the public school.

Look at the man, the bread winner, who is bearing the heat and burden of the day; look at that poor cramped mother-life that scarcely looks out or up from the daily routine of domestic life! Why not have large assembly halls in all public schools as in some of them? Why not have university extension on some rudimentary scale in these halls, which would bring culture to the adult mind, upon which mind and heart the little child is more dependent than upon yours and mine? Why not make these schools great social unifiers to blend into one great democracy of God?

There is a great deal more that is common in mankind than there are points of difference; there is a great deal more to agree about and join heart and hand over than there is to strive about. There are glorious possibilities for a real true democracy, but it must not only be an educational democracy, not only a political democracy, but there must be an industrial and social democracy. In heaven's name, fellow-teachers, let us get into the middle of the road, away from cast, away from class, away from this ungodly strife, and be apostles, imbued with that new personality which has been spoken of—mediators—which may be defined as having more and more points with Father God and brother man—that is the medium for the transmission of the truth and the power of God to humanity.

In Hartford, one time, an apostle of education lived next door to a little idiotic child. The child used to lie on the grass, almost a lump of immobile flesh. He thought the remnant of a soul could surely be awakened there. He tried many ways to attract the child's attention but without success. One day he lay down beside the child and tried to attract its attention. He began to roll, and as he rolled the child looked at him, and as he rolled, after a time, the child rolled in the same direction that he did. Out of that experiment there came the suggestions of the training of feeble-minded children, and that man became the great apostle in this country of the training of the deaf. I refer to Gallaudet. I believe we are coming down to mother earth, we are getting in sight of the defective child. Froebel's declaration that harmony would at length be the watchword has at last come true. Would that

you great apostles of the life method of education may in some way help engraft it upon the education of the children clear up to the theological seminary; then the minister of religion and the teacher in educational work would understand that great Teacher, who stood with a little child in His arms, and said: "Except ye receive as this little child, ye cannot enter the Kingdom of Heaven." Ever since He stood there, every teacher that has really stood anywhere in education has stood between that on-coming kingdom of God and the little child, learning how that little child receives and believes, receiving as that little child receives, bringing the kingdom into the child, and, better still, in these days of ours, bringing the child into the kingdom, and so answering that great prayer to which all hearts can bow: "Thy Kingdom come, Thy will be done in earth as it is in Heaven," where before the Heavenly Father there always stand the angels of little children.

FROM THE GENERAL DISCUSSION.

MR. O. T. BRIGHT.

This meeting has been just what I expected it to be. The meeting of this Illinois Society for Child-Study has far exceeded our most sanguine expectations. This doctrine that Dr. Hall has preached to us, I believe appeals to every teacher in this presence. I believe the teachers of Cook county and of Chicago are ready for this movement, which has been so clearly pictured. It makes no difference what may be said as regards this study of nature, nature-study—we are in it for life and we are going to work right along these lines just so long as we live and are able to work. The newspapers are going to help us, too; by-and-by, they too, will come into the kingdom.

Now this phase of the subject of Child-Study and nature-study that Dr. Taylor has spoken of so earnestly, I want you to remember. Dr. Taylor is no foreign missionary; he lives here. And what he has depicted is within a half mile of this building, all around here; and within a mile of this building are thousands of such children as he has spoken of, who do not know what a tree is, who do not know what a field is, and even do not know what a flower is except as they see it at a distance. A teacher told me, the other day, that a boy in the sixth grade of one of the public schools of Chicago asked, if he got on top of the Auditorium, could he see the whole world. What is the good of such teaching as that, with nothing to build on?

I want to offer this resolution, that the teachers of Cook county, and the teachers of Chicago, here assembled, hail with joy the movement which has been started in this city, towards creating summer schools, and urge that these sum-

mer schools, as a main feature, tend to country excursions. I want to add that we pledge our earnest support in any possible way that we can give, both through our influence and through our means, scanty though they be, to the furtherance of this object.

COL. F. W. PARKER.

I wish to ask, what will come to the children from all this? How much of the bread of life will they get because we have been at this convention and heard these men and women? This is a vital question. We can feast our souls temporarily upon these grand things; but how much, oh teacher, will your school get? How much, oh mother, will your child and other children get, because you have studied these things?

Humanity and its needs! Man is the demand; God is the supply. Infinite demand and infinite supply! It is the glory of personality to be the mediator, to supply this demand, to satisfy the souls that hunger and thirst after righteousness.

We may meet here and rejoice that we live; but how about the streets over there; how about these children, thousands and tens of thousands of them that live the miserable lives which a degrading and awful environment inevitably brings? The universe is full, God has given full measure; the world awaits, as ever, the mediators.

I know that from this meeting will go forth a new spirit; I feel it; it is here. Why? It has already been said, and it is profoundly true, that through the study of the child all barriers would fall down before this new entrance into the kingdom. We have felt it in this glorious meeting, a glorious harmony, a union of the great university, of the kindergartens, of the teachers, of the mothers, of all.

There is just one thing to do: Find the child's needs, give him the means by which to work out his soul's salvation. We give the child so little! In my early teaching, I saw not, I heard not, the glorious things, the heavenly mansions; my eyes were blind, my ears were deaf. Dr. Hall has brought my bitter shortcomings to my mind. My salvation was that

I had a suspicion that there was something better than the teaching, the studies, text-books. Sick at heart, there was still the hope of something better for the children, some new gift to humanity. One day I read of a glorious leader in the teaching of this world; I read Carl Ritter, and the veil was lifted. I saw the old farm and I knew that I knew—I had learned my lesson, and it was for all time. It has never left me. In the moment of my greatest trial, when the very foundations of life were shaken, the old river, the beautiful river came up with its lovely slopes, its meadows, its dashing waters, and sang in my heart, "There is a God, eternal and loving; He loves you, and gives Himself, His universe, to you." Could any argument of man equal the proof that came to my heart in the revival of my boyhood experience?

There is nothing for the child when we are held by the barriers of tradition, held by rigid tenets, and do not—cannot—give ourselves to this one work of all mankind, finding God's truth and applying it. What will this year bring? It will bring what you give—you teacher, you superintendent, you principal; it will bring what you mother, yourself, give to the study of children, and may we devoutly work and pray that this year shall roll away filled with the sacredness of childhood and the glory of God!

ORDER OF PHYSICAL GROWTH IN THE CHILD.*

BY BAYARD HOLMES, B.S., M.D.

PROFESSOR OF SURGERY IN COLLEGE OF PHYSICIANS AND SURGEONS OF CHICAGO.

There is no possibility of considering a problem like child-growth without considering at the same time child-life. All problems of human life are essentially ethical and social problems. No excuse is necessary, therefore, for bringing this topic home to the teacher as an ethical problem. My thesis will be presented in a series of problems which will be illustrated rather than demonstrated and a conclusion which will be presented for your consideration.

1. *There is a regular order of physical growth in the child. The normal curves of growth for boys and girls are quite different. No individual child conforms exactly to this curve but each one follows its sequence closely. The order of growth is practically invariable and deviations in time are not considerable.*

The boy at birth has an average height of 50 centimetres, and the girl 49 centimetres. During the intervals between the first, third, sixth, tenth, fifteenth, and twenty-first months, the average increase in height is 7½ centimetres. The average increase in height during the first year is from 19 to 23 centimetres; during the second year, 10 centimetres; and during the third year, between 7 and 8 centimetres; with an annual increase of only about 4 or 5 centimetres during the succeeding ten years. A considerable acceleration of growth is noticed among boys and girls, beginning with the former at thirteen and with the latter at eleven. The rapidity of growth in the girls is such that from eleven to sixteen they are taller than boys of the same age. Boys continue to grow with about the same degree of rapidity until twenty, while the growth of the girls is almost entirely completed at seventeen or eighteen.

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* Address before the Child-Study Section of the Illinois State Teachers' Association, Springfield, December 30, 1896.

The new-born child has an average weight of 2,600 grammes for girls and 3,200 grammes for boys. There is a normal variation extending between 2,500 and 5,000 grammes. Occasionally, greater weights are observed. During the first three or four days after birth, there is a normal loss of weight of between 6.15 and 6.96 per cent. The average loss of weight is about 222 grammes. This is followed by a rapid increase in weight, which is greatest during the second month. The following table taken from Hähner gives the result of his observations:

	Weight in Grammes.	Gain.	Daily Gain.
Birth	3100	.....	.....
One Month	3835	735	24.5
Two Months	4930	1095	36.5
Three Months	5540	610	20.3
Four Months	6010	470	15.6
Five Months	6680	670	22.3
Six Months	7005	325	10.8
Seven Months	7680	675	22.5
Eight Months	8100	420	14.0
Nine Months	8370	270	9.0
Ten Months	8680	310	10.3
Eleven Months	9170	490	16.3
Twelve Months	9470	300	10.0

It is easy to remember that, as a rule, the child weighs twice as much at its fifth month, and three times as much when a year old, as it does at birth. The increase in weight is so slow after the first year that at the end of the sixth year the child weighs only twice as much as at the end of the first year, and the next doubling of weight occurs at about the end of puberty.

The child is readily distinguished from the youth and the adult by the proportion which the head maintains to the rest of the body and by the form and proportion of the trunk or one of the extremities. The face alone readily distinguishes children of different ages, and this is not due so much to the expression of the face as to the proportion of its various parts. The pictures which I have selected to show four stages in life are classical and readily recognized as correct.

Langer has reduced pictures of men and children to the same absolute height and then drawn lines to show the gradual increase in the trunk and extremities in advancing age. (Comp. Figs. 1, 2, 3 and 4).

Any individual child manifests decided variations from a fictitious middle-sized boy or girl. The periods of accelerated growth are shorter and the curves are sharper. The accompanying tables (Tables 1 and 2, pp. 213 and 214) are copied from the valuable contribution to the study of child-growth which were prepared by Wm. Townsend Porter from the study of the school children in St. Louis.

2. *This regular order in physical development is synchronous with a co-ordinate development of the faculties and functions of the mind.*

It is not possible to say that mental development is dependent upon physical development, but it is better to say they are inter-dependent. Upon emerging into the world, the new-born child has such a physical development as is necessary to withstand the ordinary requirements of its life. The muscles of deglutition and the process of nursing, as well as the respiratory processes are ready for immediate activity. The vocal organs are usually called into violent activity during the first moment of life and the little stranger is able at once to call attention to his physical discomforts. His other mechanical functions are very imperfect, but he has the strange power of grasping any small object like the finger and sustaining his weight. From this time on mental and physical development go on together. He kicks, screams, scratches, gaps, yawns and sneezes, and at last begins to show the effects of external objects to the senses of taste, smell, sight and hearing. The progress made in physical and mental growth during the first year of life is simply astonishing. The child learns a certain amount of dynamics, statics, hydraulics, optics, acoustics and thermics. He learns these things thoroughly as far as he goes. Between five and eight he studies architecture and building and becomes quite a costumer. His buildings at first are largely cave dwellings, in the construction of which he becomes acquainted with gravity in shoveling out the earth, with impenetrability of

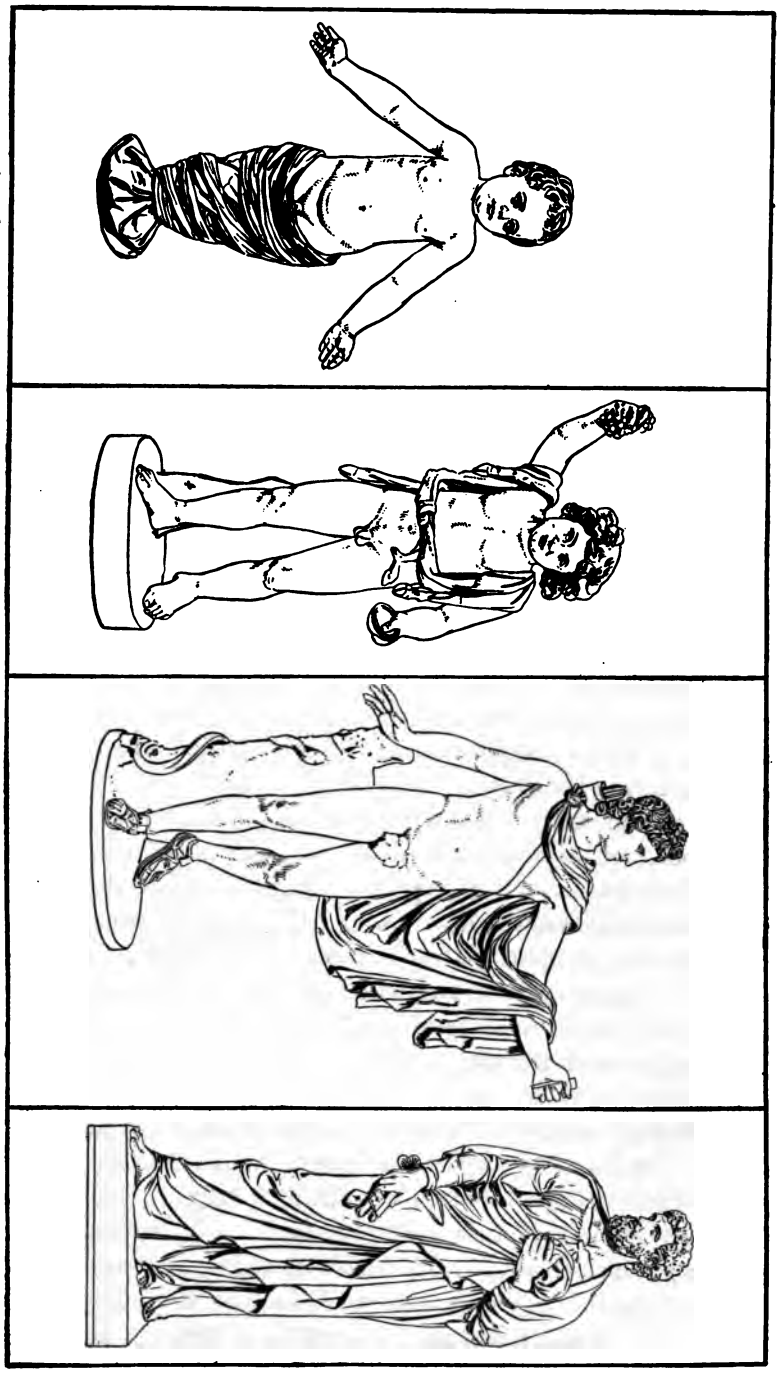

FIG. 1.

FIG. 2.

FIG. 3.

FIG. 4.

matter, the processes of fire-building, and usually with the use of fire in cooking. A little later his habitations are made above ground and contain many of the appliances of civilization. At last some rude ornamentation is attempted and a snug and comfortable place for rest and sleep is prepared.

After this period has passed the child enters upon a constructive period in which he begins to use the knife and other instruments of precision in making articles of use or play. And at a still later period when the locomotor apparatus has reached its full development his mind follows the birds and beasts or leads him to explore distant brooks or woods or mountains. This is the rambling period when boys run away from home rather than submit to the restraints of unthinking parents.

3. *Normal physical growth is interrupted, defeated or dwarfed by* (*1*) *inadequate food and clothing*, (*2*) *injuries and diseases*, (*3*) *improper over-stimulating or under-stimulating environments*, (*4*) *artificial restraint and*, (*5*) *untimely toil.*

Insufficient nourishment begins whenever a mother through incapacity or lack of motherly feeling refuses to nourish her child from her own breast. Artificial feeding is one of the most potent sources of ill-development in the new-born and it must be looked upon as a dangerous procedure even when conducted by the most scientific physicians and under the most favorable circumstances.

There are now about four million unemployed men in the United States, not to mention the voluntary idle. This certainly represents eight million under-fed children in the families of these idle laborers. These under-nourished, embryonic American citizens will fall short of attaining that physical development which is necessary to a healthy manhood, and so far they will fall short of becoming good and productive citizens.

In the stress of our competitive system the division of labor has gone so far that it has eliminated the cook-stove from a very large proportion of city houses and put into the hands of a special class the preparation of the "staff of life." The production of bread for sale and not for use has so far diminished its nutritive power that the bread of our cities is wholly inadequate to remain as the principal article of diet for the growing child. Nearly all other articles which enter into

the food of the children of the poor are dreadfully adulterated, sometimes with pernicious, but usually with inert, substances. The milk supply of cities so necessary to be kept in its original purity for the welfare of growing children has already attracted the attention of the people and become subject to municipal regulations, but the major portion of the child's food escapes even a superficial inspection.

The ravages of disease are most terrible during the first five years of a child's life. During these years there is the most marked mental and physical growth. In the city of Chicago in the year 1894 eleven thousand and nineteen children under five years of age died out of a total of twenty-three thousand eight hundred and ninety-two deaths from all causes; the greatest number of children, 1,742, died in the month of July and the smallest number, 604, in the month of February. The death rate of the city in the year 1894 was 15.24 per 1,000 of population, and the death rate under one year was 141.83; for the second year, 39.85; for the third year, 19.32; for the fourth year, 12.59; for the fifth year, 11.35, making the death rate for the first five years of life 49.49 per 1,000 children of that age. The death rate during the second period of five years is only 5.7. The succeeding ten years of life had a death rate of 3.1.

During this first period of five years not only do we find a very high death rate, but the thousands of children who escape with their lives are deprived by disease of that normal physical development which every child has a right to demand of the civilized community into which it is born. One of the most destructive diseases which children suffer unnecessarily is scarlet fever, the very mention of which will bring pallor to the faces of thousands of mothers. This disease kills its thousands and leaves irreparable damage in the throats and ears of tens of thousands. The most serious sequela of this and other infectious diseases is found in the mouth breathing which follows obstruction of the posterior nares by the so-called adenoid growths. Children suffering from this growth have a peculiar, stupid, gaping expression; they are a little deaf, and are often looked upon by their teachers as stupid. These children snore at night and have deformed chests. The

EFFIG: FERDIN: PRINCIP: ET INFANT: HISPAN:
ARCH: AVSTR: &c. RO: IMP: &c. AN: ETAT: SVE: XXII
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FIG. 5.

FIG. 6.

deformity is manifest in two deep oblique grooves at the attachment of the diaphram to the sternum. The veins of the whole body are blue and distended, the roof of the mouth is narrow, and the arch of the palate is gothic-like. These children are apt not only to be deaf, but they frequently have earache, headache and even dizziness, and sometimes they have epileptic attacks. These children are dwarfed in their general physical growth, and they are often troubled with a chronic cough, annoying to their parents and teachers. This disease is wide-spread and of ancient origin. The accompanying picture of Ferdinand I. (FIG. 5), shows that he suffered from this disease in its most exaggerated form. Nearly every member of his house, both male and female, suffered equally. This picture will furnish a type, less exaggerated forms of which may be found in the persons of one-fifth of the children in any school. These children are usually the dull, stupid or intractable pupils who most try their teachers. We learn from Meyer, of Copenhagen, that the sculptor Canova suffered dreadfully from this disease, and had as a result suppurative disease of the middle ear and frightful headaches. In women it gives the expression seen in the portrait of Madame de Montpensier (FIG. 6). After the proper and complete removal of these growths, nose-breathing begins, the chest develops, the stupidity disappears, and the child shoots up to his normal size.

The normal growth of the child is frequently obstructed by near-sightedness. If children refuse to play out of doors and are interested in picture-books and in reading or sewing they should immediately be examined, and many times it will be discovered that they are unable to recognize objects at a distance 50 to 100 feet. This defect deprives them of the stimulus to play which can be restored to them only by the use of properly adapted glasses. The teacher, the parent and the child himself is often ignorant of this deficiency.

The only proper environment for children is country life. Children do not thrive in flats and men do not grow out of city-bred children. The child is properly a little savage and should be so situated as to lead a life among trees, flowers and running waters. Only such a life as the country affords

gives the stimulus and opportunity for physical and mental development. A city life over-stimulates in particular directions. The street urchin of our great cities has a remarkably keen and knowing face which it is pitiable to behold; but this untimely keenness is as abnormal as childish simplicity in middle life.

It seems to have been the principal occupation of the old-time teacher to restrain and restrict the normal activities of the child. I can remember looking with wonder at rows of boys and girls in one of the little red school-houses of New York—scared, suppressed and awkwardly uncomfortable. This picture has been somewhat modified in modern times by the introduction of more humane methods, but our school-rooms are still filled with iron desks and our children are still under iron restraint. They must keep still and get their lessons and not make any noise; they must sit up straight and not swing their feet or hitch about, or put their elbows on the desks or look around behind them; they must not whisper nor mumble their lessons, and they must walk on their tip-toes and not slam the doors nor speak aloud nor knock anything on the floor. All of this restraint makes the children awkward, artificial, self-conscious and unattractive, and interferes with physical, mental and moral growth.

Last of all let me call your attention to the most pitiable of all interferences with the normal physical and mental growth from which the children of these last days suffer:

In the State of Illinois there are at work in the factories about 8,000 children who are between the ages of 14 and 16. Besides these there are estimated to be 15,000 children at work in the stores, offices and other business houses of Chicago. This makes a total of at least 23,000 children at work in this great state. The average wages earned by each child is less than $2.00 a week which must pay not only for the food and clothing of the child, but also its transportation and the fines which are imposed upon it for errors or misconduct. Little boys and girls open the doors of business houses, run with cash, tie up bundles, even sell goods in the basements, and do all sorts of odds and ends of work. They come home shattered and used-up, and frequently suffer from nervous

prostration of the most severe kind. A few weeks in a store wholly unfits the child for any further school work. The exacting hours, never less than nine and frequently more than twelve, soon use up the vital forces and stunt the growth and benumb the mind and conscience. Child-labor is probably the most dreadful interference with child-growth, outside of underfeeding, from which the next generation of this republic now suffers.

4. *When a child fails for any cause to attain its normal growth and deveiopment at any period of acceleration, then he never succeeds in making up this growth and development, no matter how favorable his subsequent environment may be, and these defects dwarf and distort all subsequent physical and mental development.*

Forms of this law are familiar to you all; the deformed teeth which result from disease interfere with all subsequent mastication; the deformed extremities of the rachitic child interfere with his locomotion and make him a prey of ridicule, sour his temper and embitter his whole life. If physical and mental growth is not attained in childhood, the most favorable manhood will not be attained by the lost opportunity to grow and learn.

5. *The interruption in the periods of growth by inadequate food, by disease, by improper environment, by artificial restraint, and by child labor may be almost entirely removed and it is the duty of every teacher, as the guardian of the child, to do what can be done to accomplish this end.*

Children are starving in these United States, not because there is a famine, but because nature has yielded too much wheat and too many cows; and four million men are idle, not because they have proved inefficient workmen, but because the products of their labor have been so great that the storehouses of their employers are full of goods. Twenty-three thousand children are engaged in untimely toil, not because there are not men enough to do the work of the world, but because children can be employed cheaper than men and women.

It is evident that in any community so rich as ours there is no room for child-labor, and I believe it is the sense of this body that a law be passed which would secure the removal of

all children who have not yet attained their growth, from manufacture and commerce. But if these children are removed from shops and are required to be in school, it will be necessary to provide some means of feeding them, and a subsidy should be provided for their support as long as they are required to be in school.

The chart on page 212 shows what has been done in Michigan in diminishing the ravages of scarlet fever and diphtheria, and the same means should be instituted in the state of Illinois. I might call your attention here to the fact that the department of agriculture, which is largely engaged in studying the diseases of hogs and cabbages, costs the United States government two million dollars a year, while the aggregate amount spent from the public purse in studying the diseases of men and children does not equal one-tenth of this amount.

In regard to the restraints of the child in school, the teachers have it in their power to make our public schools "free schools," free for the normal activities of the child. This is a problem for the teachers, and one for which I believe them capable and ready.

CONCLUSION.—*A life free from want, care, and toil is necessary for the mental and physical development of the child; and since the physical stature is not complete before the 19th or 20th year of life, every child is entitled to nineteen or twenty years of youth, free from toil.*

As a body of teachers, I believe that you all know that the earth has produced enough and more than enough to supply the hunger of all men. The labor of men's hands is able to produce enough and more than enough of all good things to supply the necessities and decencies of every citizen. I believe that you all agree with me that the resources of nature and the ingenuity of man are not yet exhausted, and it remains only for you to say whether or not you agree with me in thinking that man is ingenious enough, that man is just enough, that man is humane enough, to contrive a condition of society in which every man shall share of these good things in proportion to his needs. For this end let us make war. Let us make war, not against, but for—for a condition in which our children shall not be our thralls.

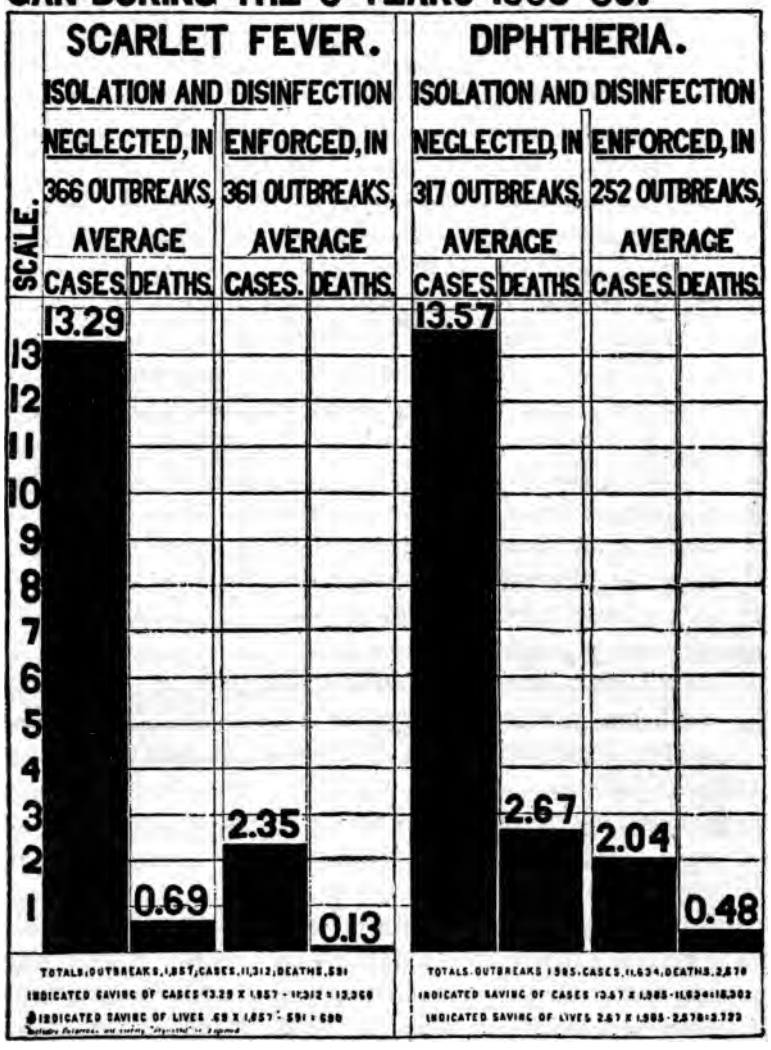

CHART.—SHOWING THE EXTENT TO WHICH TWO SERIOUS DISEASES OF CHILDHOOD HAVE BEEN RESTRICTED IN THEIR RAVAGES IN THE STATE OF MICHIGAN.

TABLE I.—FROM WILLIAM TOWNSAND PORTER'S MEASUREMENTS OF ST. LOUIS SCHOOL CHILDREN.

THE HEIGHT STANDING (*Centimeters*).

AGE AT NEAREST BIRTHDAY.	Sex.	Number of Observations.	Average.	Probable Error of Average. *E.*	Probable Deviation. *d.*	Relation of Prob. Dev. to Average. *d./A.*	Absolute Annual Increase of Average.	Relative Annual Increase of Average.	25 Percentile Grade.	Median or 50 Percentile Grade.	75 Percentile Grade.	Median Minus Average.
Six	Boys	709	108.94	±0.128	±3.40	% 3.1	....	% ...	105.99	109.23	112.69	+0 29
	Girls	780	107.67	0.123	3.42	3.2	....	...	104.74	108.10	111.39	+0.43
Seven	Boys	1850	114.03	0.084	3.61	3.2	5.08	4.7	111.02	114.48	118.02	+0.45
	Girls	1791	112.95	0.089	3.75	3.3	5.28	4.9	109.72	113.44	117.07	+0.49
Eight	Boys	2223	119.13	0.082	3.89	3.3	5.10	4.7	116.08	119.77	123.58	+0.64
	Girls	2193	118.36	0.079	3.70	3.1	5.41	4.8	115.07	118.74	122.35	+0.38
Nine	Boys	2205	124.35	0.080	3.75	3.0	5.22	4.4	121.09	124.87	128.76	+0.52
	Girls	2122	123.67	0.083	3.83	3.1	5.31	4.5	120 90	124.11	127.58	+0.44
Ten	Boys	2087	128.87	0.087	3.98	3.1	4.52	3.6	125.49	129.45	133.54	+0.68
	Girls	2053	128.43	0.089	4.06	3 1	4.76	3.9	124.96	128.85	132.58	+0.42
Eleven	Boys	1819	133.84	0.099	4.23	3.2	4.97	3.9	130.03	134.44	138 29	+0.60
	Girls	1772	133.19	0.106	4.48	3.2	4.76	3.7	129.23	133.60	137.97	+0.41
Twelve	Boys	1653	138.21	0.116	4.47	3 2	4.37	3.3	134.25	138.57	142.99	+0.36
	Girls	1732	139.11	0.098	5.23	3.4	5.92	4.4	134.61	139.54	144.44	+0.43
Thirteen	Boys	1268	142.91	0.140	4.98	3.5	4.70	3.4	138.45	143.29	148.28	+0.38
	Girls	1322	146.53	0.150	5.46	3.8	7.42	5.3	140.98	146.19	151.79	−0 34
Fourteen	Boys	925	148.58	0.183	5.58	3.8	5.67	4.0	143.43	148.86	154.52	+0.28
	Girls	1085	150.84	0.156	5.15	3.7	4.31	2.9	146.85	151.94	156.32	+1.10
Fifteen	Boys	490	154.90	0.286	6.33	4.1	6.32	4.3	148.88	155.25	161.86	+0.35
	Girls	680	155.04	0.154	4.01	3.4	4.20	2.8	151.75	155.82	159.58	+0.78
Sixteen	Boys	189	160.27	0.427	5.87	3.7	5.37	3.5	155.28	161.27	167.04	+1.00
	Girls	420	157.52	0.197	4.05	2.6	2.48	1.6	153.94	158.03	161.81	+0.51
Seventeen	Boys	78	165.13	0.592	5.15	3.1	4.86	3.0	160.79	166.00	171.34	+0.87
	Girls	206	159.33	0.241	3.45	2.2	1.81	1.1	155.65	159.65	162.93	+0.07
Eighteen	Boys	29	170.41	0.924	4.98	2 8	5.28	3.2	.....	170.50	.....	+0.09
	Girls	164	159.42	0.265	3.39	2.1	0.09	0.06	156.40	159.50	163.29	+0.08
Nineteen	Girls	85	158.46	0.438	4 04	2.6	....	....	154.32	159.56	163.27	+1.10
Twenty	Girls	79	159.41	0.353	3.08	2.0	....	....	.....	159.83	.....	+0.42

TABLE II.—THIS TABLE IS USEFUL IN DETERMINING THE REAL HEALTH OF THE CHILD AND HIS PROBABLE MENTAL CONDITION. THIS CONDITION DEPENDS VERY LARGELY ON A LARGE THORAX AND UNOBSTRUCTED BREATHING. THE GIRTH OF CHEST MIDWAY BETWEEN INSPIRATION AND EXPIRATION (*Centimeters*).*

AGE AT NEAREST BIRTHDAY.	Sex.	Number of Observations.	Average.	Probable Error of Average. *E.*	Probable Deviation. *d.*	Relation of Prob. Dev. to Av'age. *d./A.*	Relation of Average to Height Standing.	Absolute Annual Increase of Average.	Relative Annual Increase of Average.	25 Percentile Grade.	Median or 50 Percentile Grade.	75 Percentile Grade.	Median Minus Average.
Six	Boys	677	59.05	±0.083	±2.22	% 3.8	% 54.2	....	%	57.45	59.32	61.42	+0.27
	Girls	741	58.34	0.091	2.48	4.3	54.2	....	....	56.81	58.87	60.98	+0.53
Seven	Boys	1708	60.62	0.057	2.38	3.9	53.1	1.57	2.7	58.79	60.89	63.25	+0.63
	Girls	1631	59.47	0.062	2.47	4.2	52.7	1.13	1.9	57.65	59.87	62.31	+9.40
Eight	Boys	2095	62.18	0.052	2.35	3.8	52.2	1.56	2.6	60.49	62.55	65.13	+0.37
	Girls	2040	60.81	0.053	2.40	3.9	51.3	1.34	2.3	58.94	61.34	63.80	+0.53
Nine	Boys	2120	63.90	0.055	2.51	3.9	51.4	1.72	2.8	61.97	64.33	66.91	+0.43
	Girls	1966	62.51	0.057	2.53	4.0	50.6	1.70	2.8	60.65	63.03	65.60	+0.52
Ten	Boys	1997	65.59	0.061	2.72	4.1	50.9	1.69	2.6	63.49	65.92	68.64	+0.33
	Girls	1893	63.02	0.061	2.67	4.2	49.1	0.51	0.8	61.18	64.46	67.16	+0.45
Eleven	Boys	1732	67.24	0.063	2.61	3.9	50.2	1.65	2.5	65.29	67.68	70.32	+0.44
	Girls	1654	65.85	0.075	3.04	4.6	49.4	2.83	4.5	63.38	66.36	69.12	+0.52
Twelve	Boys	1565	68.76	0.074	2.94	4.3	49.8	1.52	2.3	66.53	69.17	72.06	+0.41
	Girls	1624	68.34	0.081	3.24	4.7	49.1	2.49	3.8	65.67	68.49	72.04	+0.16
Thirteen	Boys	1228	70.61	0.089	3.11	4.4	49.4	1.85	2.7	68.09	71.01	74.13	+0.40
	Girls	1313	71.29	0.098	3.54	5.0	48.6	2.95	4.3	68.32	71.64	75.13	+0.35
Fourteen	Boys	925	73.27	0.118	3.58	4.9	49.3	2.66	3.8	70.24	73.38	77.27	+0.11
	Girls	1020	74.13	0.114	3.65	4.9	49.5	2.84	4.0	71.03	74.59	78.29	+0.46
Fifteen	Boys	498	76.56	0.169	3.77	4.9	49.4	3.29	4.5	73.25	76.94	80.82	+0.38
	Girls	659	76.78	0.143	3.70	4.7	50.1	2.65	3.6	73.67	76.92	81.15	+0.15
Sixteen	Boys	205	79.22	0.293	4.19	5.3	49.4	2.66	3.5	75.61	79.90	83.71	+0.68
	Girls	397	78.85	0.164	3.27	4.1	50.5	2.07	2.7	75.98	79.22	82.85	+0.37
Seventeen	Boys	80	81.39	0.353	3.15	3.9	49.3	2.17	2.7	78.90	82.20	85.77	+0.81
	Girls	206	80.39	0.233	3.34	4.2	50.8	1.54	2.0	77.53	80.72	84.13	+0.34
Eighteen	Boys	31	84.52	0.528	2.94	3.5	49.6	3.13	3.8	82.69	85.35	88.38	+0.83
	Girls	162	80.45	0.254	3.23	4.0	49.7	0.06	0.1	77.68	80.92	84.90	+0.47
Nineteen	Girls	82	79.10	0.380	3.43	4.3	50.4	....	....	76.61	79.81	82.84	+0.71
Twenty	Girls	66	80.54	0.339	2.76	3.4	....	....	....	78.20	81.04	83.99	+0.61

* Obtained by adding the girth of chest at full inspiration to the girth of chest at full expiration, and dividing by 2.

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